Smithsonian

MARCH 1999

The Return of the Jitterbugs

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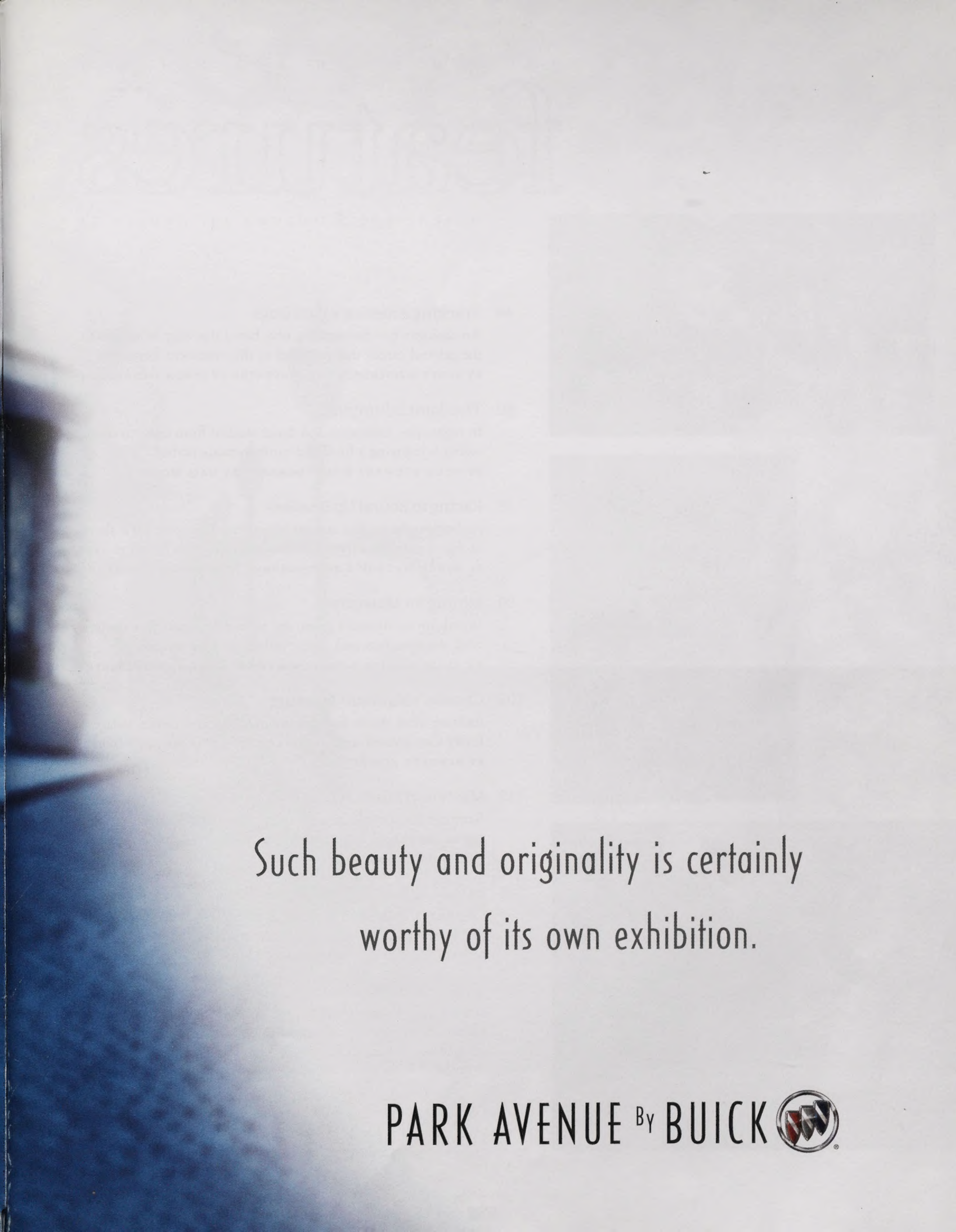
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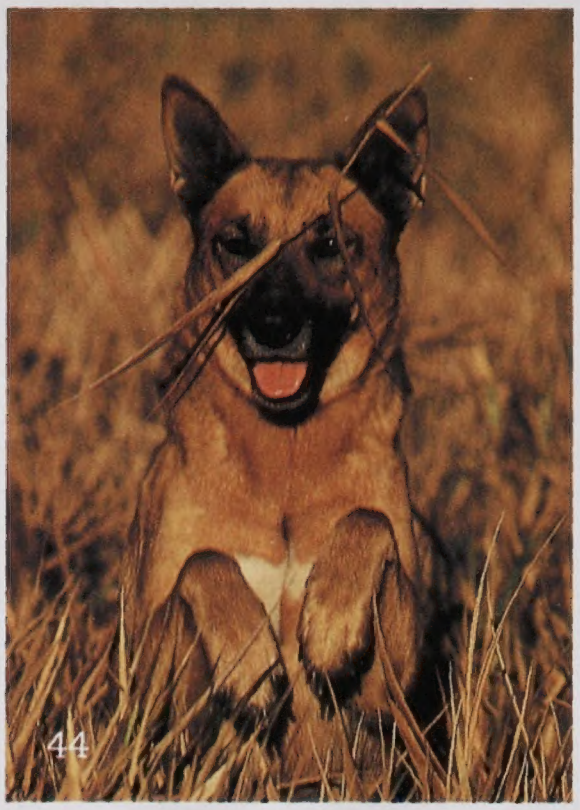

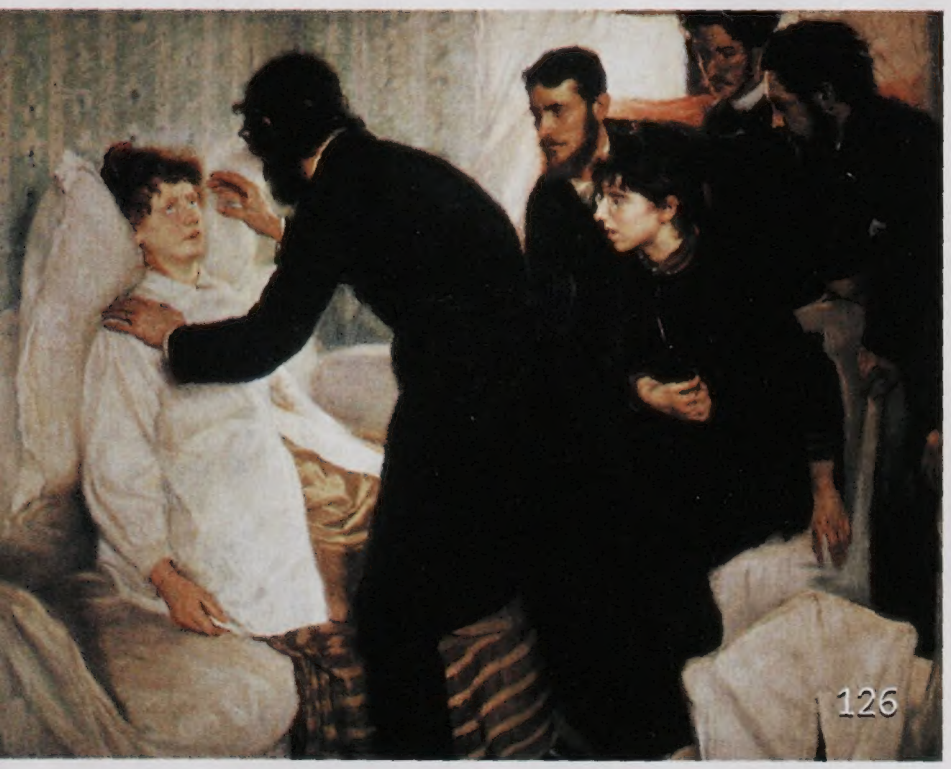

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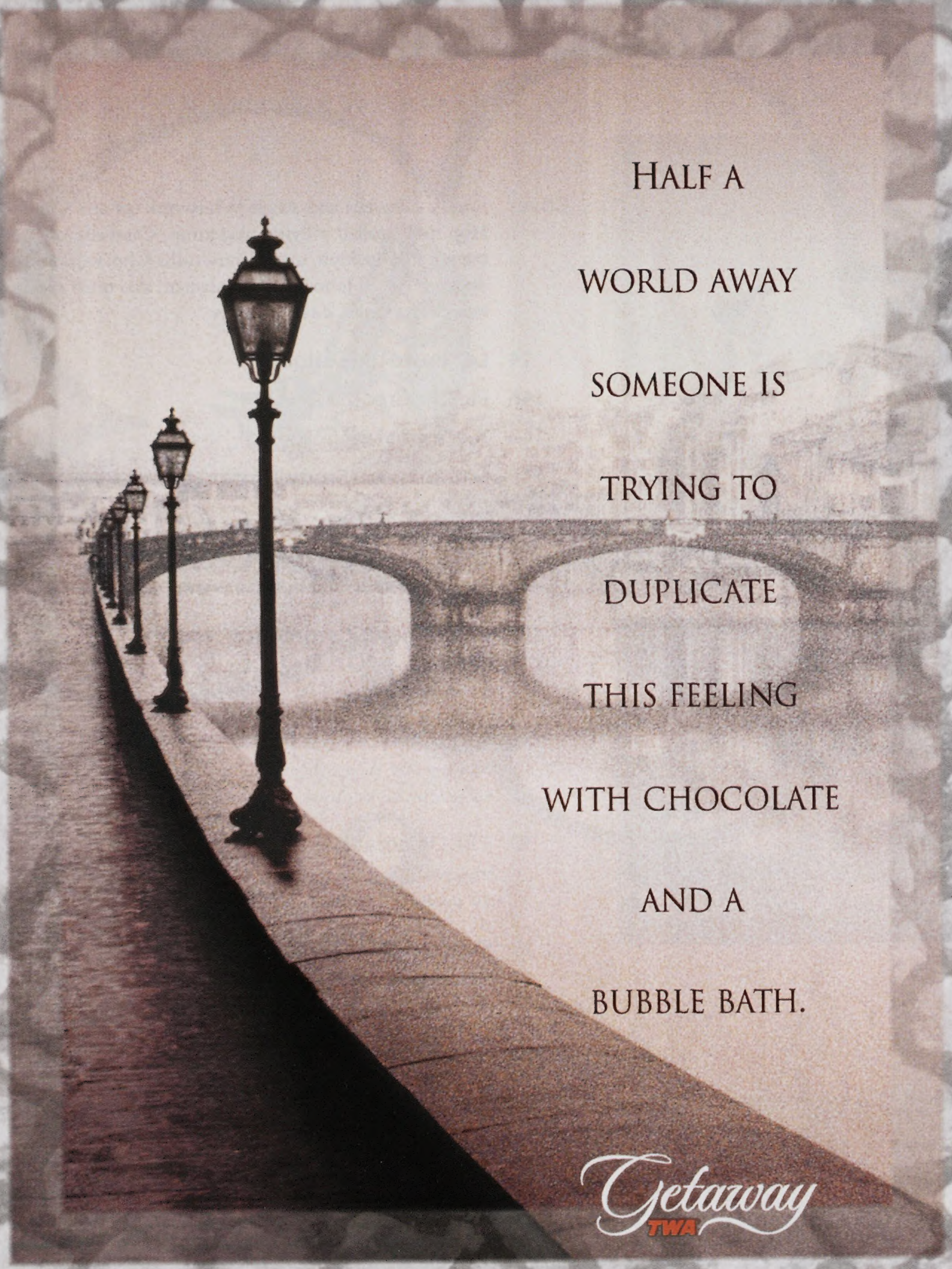

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SMITHSONIAN

departments

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Cover

Cover Roddy Caravella and Angie Whitworth get airborne in a Lindy Hop move called a flying frog jump. Caravella, a general contractor in Brooklyn, and Whitworth, who works for clothing designer Betsey Johnson in Manhattan, also teach swing classes.
PHOTOGRAPH BY GAIL MOONEY

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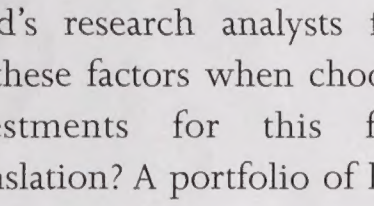

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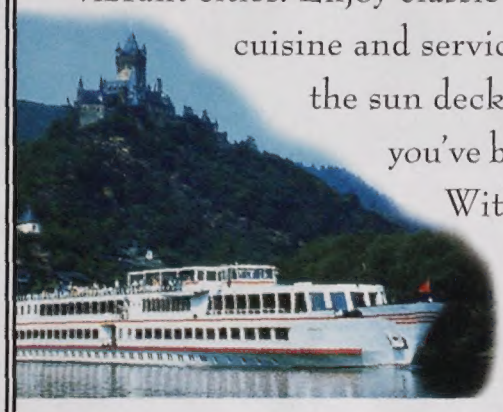

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SMITHSONIAN PERSPECTIVES

Looking Back and Ahead

WITH REGRET BUT A LEGACY OF ACCOMPLISHMENT, THE SECRETARY PLANS TO LEAVE THE SMITHSONIAN IN DECEMBER

I INFORMED THE REGENTS OF THE SMITHSONIAN LAST May that I was contemplating retirement at the end of five years, the term I originally agreed to serve. They graciously asked me to continue serving beyond that time. After considerable thought, however, I have now informed the Regents that I will step down as Secretary at the end of 1999. I do this with regret, of course, but also with pleasant anticipation. I regret departing from both the Institution, which is so important in our national life, and from those who are responsible for what it does. But I look forward to returning home to California in my 70th year and reestablishing my ties with the University of California and the San Francisco Bay Area.

The Regents appointed me in 1994 to address then present problems and to devise and implement new initiatives. We have progressed in simplifying the management structure, redetermining the relationships between the Secretary's Office and the museums and research institutes, establishing accountability for decisions made within the Institution, and maintaining productive relations with Congress and the executive offices. And we have maintained excellent programs. Research is prospering, with our centers receiving high grades in peer review. Museum exhibitions continue to do well, with increasing visitorship, but we must raise additional resources to ensure progress.

Moreover, we have strengthened our commitment to deliver Smithsonian resources and expertise to Americans wherever they live. The 150th anniversary exhibition, "America's Smithsonian," brought more than 300 of our treasures, as well as curators and scientists, to three million-plus visitors in communities across the nation. The promise of electronic access to exhibitions and collections has been fulfilled through the creation of a popular Website, a digitization program and a commitment to new technologies. And we are developing partnerships with museums all over America to share our collections through long-term loans. An example of this is the proposed museum of industrial history in Bethlehem, Pennsylvania.

The Smithsonian has also become more inclusive by extending its reach and resources to encompass the experiences of Latinos and Asian-Americans in our society. Our objective is to reflect every strand of the nation.

Finally, we are endeavoring to raise considerably more resources from the private sector. We will formally announce our national fundraising campaign soon. Preparatory activities have already stimulated enhanced giving.

We still have problems that we have not solved. The two most prominent ones involve physical plant and business activities. We need more space as well as a much increased federal budget for repair and renovation of existing buildings. And we must implement plans to make our Institution-related business activities more productive in order to help provide special exhibition support and stipends for our interns and research assistants.

I intend to have an active final year at the Smithsonian. There are four chief matters on my agenda. First, I want to participate in the groundbreaking on the Mall for the National Museum of the American Indian. Secondly, I expect to see the fundraising campaign well-defined. Thirdly, I want to acquire an additional facility for the National Museum of American Art, the National Portrait Gallery and the Archives of American Art. Fourthly, I intend to establish an organization at the Smithsonian to carry on business activities, appoint its board of directors and, at their recommendation, the chief operating officer.

Every Secretary leaves much undone. I am no exception. In addition to stewardship and enhancing the Institution's resources, there is a larger issue that needs attention. An inherent advantage of the Smithsonian is that it includes history, science and art in an assemblage of museums, research facilities and programs. But we do not take sufficient advantage of this proximate diversity. Rarely do we sponsor joint exhibitions among our museums or consider whether related collections should be combined or what insights might be gained by looking at a similar subject, such as flight, from across the disciplinary boundaries of the National Zoological Park, the National Air and Space Museum and the cultural museums. What a splendid millennium exhibition we might have produced if we had the means and the will to stimulate joint activity.

I have tried to use my years as Secretary to promote a greater sense of the combined strength of the Smithsonian as a positive force in the nation. As a private citizen, I hope to join fellow citizens in the active support of the Institution's fundraising and would willingly serve in any capacity my successor might ask of me. I leave the Smithsonian in a formal sense. It will always be a part of me.

I. MICHAEL HEYMAN, SECRETARY

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DEMOLITION DERBY

RICHARD CONNIFF'S ARTICLE "CRASH, Slam, Boom!" in the January 1999 issue was a joy. I grew up in a very small Northwestern town whose annual Irrigation Festival held a demolition derby on the last day. For our family, this was the highlight because at least one of my mother's old cars would be out there.

We never had a new car, only old beaters my mother would buy for a couple hundred dollars. And they never lasted. Every year, about a month before the festival, young men would start offering my mother $50 for her car. "But, I'm not done with it yet!" she'd often reply. One year, three of her cars were in the same derby. Too bad none of them won.

Thank you for covering stories that others might consider too lowbrow: they're the most fun.

Arianna VanderHouwen
Seattle, Washington

YOUR ARTICLE WAS PRETTY IMPRESsive. I compete in demolition derbies and love it. Nothing else could give me the rush that derbies do. Once you do it, you'll always want to do it.

There was no mention of women racing. It's not only the men who do it. I am 27 and 100 percent female. Even my mother, who is a grandma, has been racing for about five years.

The only way to be able to comment on the sport is to have done it yourself, so congratulations to Richard Conniff for experiencing firsthand what it feels like.

April Steck
West Jordan, Utah

THE ARTICLE OVERLOOKED THE MOST obvious reason that may be behind the mysterious urge to participate in the crunch cavalcade of the demolition derby: bumper cars. Thanks to the pervasiveness of bumper cars at county fairs, amusement parks and carnivals, the desire to demolish is cultivated in many Americans at a very early age. And it never goes away, as evidenced by the number of grown-ups who sit behind the wheels of those primary-color cars.

Conniff made it to the big leagues; the rest of us sit with our knees to our chests, imagining the breaking glass, bent metal and exhaust fumes, banging away until the time runs out and the sweet smell of ozone drifts away.

Russell Rudzinski
Manhattan, Kansas

STONE MOUNTAIN

I READ "THE CHANGING FACE OF Stone Mountain" by Minna Morse with more than passing interest. Six years ago I worked for a company that was relocating to the Atlanta, Georgia, area. The company treated a group of us and our families to a stay at the Stone Mountain Resort, hoping to convince us to move. At first, things went splendidly.

On our last night, my family and another couple from Boston took a leisurely riverboat cruise to the monument for the laser show. Initially, we found it extremely entertaining, and thought nothing of the Confederate symbols and songs in the program. To us Northerners, the power of these symbols was long dead. I even recall singing "Dixie." At the end of the song, some people shouted "Yankee go home," which was greeted with applause. It was a sad awakening to see the irrational hate and more-than-century-old resentments that lie beneath a thin veneer of civility.

The other couple and my family decided to remain in the Northeast.

Rosa DiTucci
Boston, Massachusetts

THE ARTICLE WAS EXCELLENT EXCEPT for the total lack of understanding of what we Southerners really think about slavery and our ancestors who owned slaves. I disagree with Minna Morse that slavery is "part of the picture" that we in the South would rather forget. No reasonable Southerner defends slavery, but we do view slaveholders through the prism of the time in which they lived. Slavery was legal in all but one state at one time, and it might have survived in the North had there been some compelling economic reason for it to have done so.

My two ancestors who served in the Confederate Army did not own slaves when the war began. Although I do agree that slavery was one of the issues that led to the war, I doubt that the ancestor who endured captivity (twice), wounds, court-martial and near starvation did so just to keep the black man in bondage.

Clayton Rhodes
Savannah, Georgia

AS A SOUTHERN MALE WHO GREW UP less than 20 miles from Stone Mountain, I was eager to read your article, but you let me down. Instead of looking at progress in a community, the story dwelled on negative history associated with a tiny minority of folks in the area.

Glenn Davis
Sanford, North Carolina

IN YOUR OTHERWISE INTERESTING article, you misspelled the first name of Gutzon Borglum, who conceived the monument to Confederate heroes.

Hal Woods
Chicago, Illinois

THE OBJECT AT HAND

I READ WITH INTEREST THE COLUMN by John F. Ross, "Picturing Pocahontas." Thomas Rolfe, the only son of Pocahontas and John Rolfe, returned from England to Virginia in 1635, when he was about 20 years old.

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Fragments of Jamestown records show that on December 17, 1641, Thomas petitioned the Governor's Council and the General Court for permission to visit his maternal aunt, Cleopatra (it has been postulated that John Rolfe furnished this name for his wife's sister).

Ernest W. Smith
Jeffersonville, Indiana

Thomas Rolfe married Jane Poythress, the daughter of a Henrico, Virginia, landholder, and they had a daughter, also named Jane. Thomas had inherited land from both his father and his grandfather Powhatan, and became a tobacco planter as his father had been. His daughter married Col. Robert Bolling in 1675, but she died giving birth to their only son, John. Distinguished descendants of Pocahontas include states' rights proponent John Randolph of Roanoke (1773-1833) and the powerful former U.S. Senator Harry Flood Byrd (1887-1966). Ed.

CONSTANTINE RAFINESQUE

THE OBJECTS IN THE PHOTOGRAPH on page 113 are all from the Academy of Natural Sciences of Philadelphia (ANSP). The clam on the left, *Epioblasma flexuosa,* from the Kentucky River, was very rare when Constantine Rafinesque named it in 1820, and became extinct in the 1800s as a result of pollution and damming. The preserved fish are a species that Rafinesque named *Lepomis megalotis.*

The ANSP proudly maintains many treasures of science and history from the past three centuries. Among these is the Lewis and Clark Herbarium, which contains 226 sheets of dried plants that explorers Meriwether Lewis and William Clark collected during their 1803 expedition.

Earle E. Spamer
Department of Botany of the Academy of Natural Sciences of Philadelphia
Philadelphia, Pennsylvania

SPACE TRASH

"CASTING A HIGH-TECH NET FOR Space Trash" by James R. Chiles did not mention Buck Henry's 1978 television series *Quark.* Richard Benjamin played a starship commander, Adam Quark, whose mission in 2222 A.D. was to clean up the garbage in the Milky Way. Our children and we thought *Quark* was a quirky comedy that was very funny and unusual—so of course NBC took it off the air.

Alice and Milt Trost
Oradell, New Jersey

SALT

ONE DETAIL STEVE KEMPER OMITTED from his excellent "Salt of the Earth" article concerns the first patent issued in America. According to the Records of the Colony of the Massachusetts Bay in New England, Sam Winslow received it on April 2, 1641, for a method of making salt.

Ruth T. Geer
Charleston, South Carolina

LAST PAGE

I AM STILL CHUCKLING AT BRUCE Watson's column "Let's Get Dale to Play!" I can't help it, but I laugh every time someone plays the accordion. At a family reunion, one of my relatives hired a roving accordionist. To break the monotony, I slipped him $10 and had him follow my sister-in-law around while playing "Lady of Spain." He tailed her for an hour.

Terri Schanken
Tampa, Florida

IN THE 1950S, I, TOO, SUFFERED ACCORdion mediocrity in the first grade. Miss Maggie Hamilton, my piano teacher, thought it would be great fun for me to take up the instrument since I was terrible at piano. She started me on an accordion with ten bass buttons and one octave of treble. I knew three songs: "Happy Birthday," "Lady of Spain" and "Jingle Bells." No matter what season, you got those three songs.

Wishing to rise to the height of mediocrity, I saved my money and bought one of those models with more than 100 bass buttons and about three octaves of treble. With all that firepower, I secretly worked on that unbelievable technique that master accordion players like Dick Contino made look so easy in "Lady of Spain," the double-clutching "JIG-A-JIG-A-JIG-A-JIG." This would surely drive those mature third-grade girls wearing at least 12 petticoats to ecstasy. Alas, I could never pump the accordion with the left hand, hang in there with the melody with my right and smile at the same time. After looking at your artist's depiction of Dale, maybe I had the damn thing on upside down.

Gerald Pipkin
Matador, Texas

The artist used his license. Ed.

I AM REALLY FED UP WITH ACCORdion bashing. It is one of the truly great folk instruments of the world and can accompany countless dancing styles, including Irish jigs, Italian tarantellas, Bohemian polkas, Texas two-steps, and the Romanian and Israeli hora. It is also essential to Cajun zydeco music. The accordion is an instrument that a person can play with passion. Like the cello, it is held close to the body and requires an embracing action to make music.

So give us a break and stop beating us up with references to Lawrence Welk and "Lady of Spain" (a tune that I have never played in 54 years).

Harvey Dershin
Evanston, Illinois

WRITE TO SMITHSONIAN

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PHENOMENA

COMMENT & NOTES

When Clock Birds Sing

CAUTION: UNEXPECTED BIRDSONG CAN CAUSE FLASHBACKS THAT LIFT THE LISTENER OUT OF TIME AND PLACE

BY JOHN P. WILEY, JR.

Like a cross between bodysurfers and flying fish, dolphins use the energy in a ship's bow wave to leap again and again, behavior that is hard not to describe as play.

MY APARTMENT HAS BECOME A noisier place. Interruptions seem to come every hour. In fact, they come exactly every hour. Thanks to my offspring, I now have not one but two clocks on which the hours are represented by different species of songbird. When the big hand gets to 12, the clock plays the song of whatever bird is being pointed to by the little hand. At first, it seemed a clever gimmick, the kind of thing that is fun for a while but quickly becomes tiresome. Not so. In the beginning, I was startled every time by the birdsong out of nowhere. Within days, however, the clock birds became special. The cry of a blue jay, the buzz of a chickadee, the fog buoy call of a mourning dove, take me out of what I'm doing and tell me it's not too late, the real world is still out there somewhere. These battery-driven, mechanical devices produce nothing less than the call of the wild.

Sometimes the call is visual. It's almost shocking to look up from the computer at home just in time to see a hawk fly over the building, much less a great blue heron making its stately way over the neighboring apartment houses. Instantaneously one is taken out of whatever it was one was concentrating on and injected into a much larger world. The scale changes so fast, it must be a little like the putative inflation that happened to the very early universe. The same thing happens coming out of work and onto the Mall in the evening. If I remember to look straight up, I will be rewarded most days with the sight of gulls soaring and wheeling so high that they are mere specks of white against the sky. The world goes from two dimensions to three.

Most calls of the wild, for me at least, come in the form of flashbacks. One moment I'll be sitting at my desk as a good editor should, and the next I'm crawling on my belly over a sand dune to get a good look at the shorebirds lining a puddle at low tide. Or I'll be draped across a jungle gym of mangrove branches, watching the fish in the water below. Sometimes I'm at the rail of a ship cutting through the water, marveling at how effortlessly dolphins ride the bow wave.

Right now my flashback circuits are burning out with images from a New Year's voyage in the Gulf of California, between Baja California and mainland Mexico. (For anyone who has read Steinbeck, it will always be

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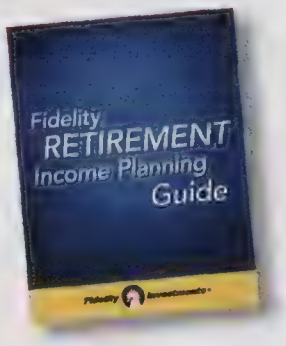

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the Sea of Cortez.) Sea lions drape themselves over rocks as if they had no bones at all. Blue-footed boobies dive with what seems a total disregard for their own well-being. Underwater, butterfly fish, blue-headed wrasses and huge angelfish swim around rocks that have tumbled down the steep hills. Ashore, as we struggle up bone-dry arroyos, naturalists point out some of the dozens of species of cactus, each with its own strategy for surviving in a place where it may not rain at all from one year to the next. From a beach we watch a manta ray jumping out of the water by twice its body length. From the ship we see a gray whale, blowing every 18 seconds until it sounds for eight minutes and then repeats the cycle, over and over.

That last paragraph could be a capsule description of the trip, but it describes just as accurately the flashbacks that leap through my mind as I go through the routine of the days. This is not the wild calling; it's the wild showing film clips, one right after another. Something like this happens to people who do weight

This is not the wild calling; it's the wild showing film clips, one right after another.

training. Their metabolic rate stays elevated for hours after the last weight is put away, burning extra calories. Just so, a trip itself is only the beginning of the trip.

In medieval villages the church bells rang out several times a day, reminding the citizens of whose kingdom it really was. Here and now, the days are getting longer and the clock birds are singing. Shades of 50 years ago, when kids would come to the door and say: "Come on; let's play ball." It's time for me to get out again.

Bird-walking down a dirt road toward a cemetery outside Cabo San Lucas, we found three species of orioles in the same set of trees. Nothing exotic here; all three are found in the United States. Unfortunately, I could not say which was which. A smaller bird with a bright-red head flitted into view. Excitement . . . until I realized it was that pest of the backyard feeder, a house finch. The proficient among us were trying to nail down the identifications of the innumerable swallows and swifts coursing in the middle distance; I didn't even try.

In a boat at the very tip of Baja California, circling the great granite monoliths known as the Friars, we saw a small bird fishing. Put away the Peterson guide to Mexican birds; this was the same belted kingfisher that rattles up and down streams back home. On that rocky island with the sea lions and boobies we did see yellow-footed gulls, an endemic species. Right there with them, however, were turkey vultures and a great blue heron, birds I see every day in Virginia.

It would seem that I would do well to learn more about the birds and trees and flowers and butterflies and reptiles of home before venturing to exotic climes. The clock birds are all common, even abundant, species. Yet for at least 6 hours out of 12, I still have to go look to see what is singing.

Maybe it's just a symptom of winter, my wanting the lushness and the prolificacy to come back. But I've felt more alive and even more upbeat since the clock birds began singing.

California sea lions ignore the breaking surf as they take their ease on a small rocky island in the Gulf of California, otherwise known as the Sea of Cortez.

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AROUND THE MALL & BEYOND

Making Art Accessible

ROSLYN WALKER PLANS TO EXTEND THE AFRICAN MUSEUM INTO THE CLASSROOM AND SEND EXHIBITS ON THE ROAD

BY MICHAEL KERNAN

"WESTERNERS HAVE BEEN DISCOVERing African art for hundreds of years," says Roslyn A. Walker, the energetic director of the National Museum of African Art. "Maybe there's some rediscovery going on, too. In the 1960s many Africans gained independence, and that brought new attention to African culture and art. The Peace Corps brought a lot of young people to Africa, and some of them majored in various areas of African studies. More recently, the President's visit there got people interested again."

And if there was still any question of some not getting the message, her museum will soon take care of that. She is determined to open it up to those who haven't heard yet.

"I want to extend the museum into the larger world. I want our exhibits to relate to people's lives. African art certainly addresses all the events in the human life cycle."

I talked to her in her wonderfully cluttered office. (A huge table is covered with papers: she knows where everything is, but there is one unusual item, an x-ray of an African sculpture. X-rays, I learn, help determine the authenticity and value of objects—whether they've been broken and repaired or the wood has been recarved.) "Do Africans themselves appreciate what the museum has to offer?" I asked.

"African immigrants in the area? Oh yes! Take some of the African taxi drivers, for example."

There are a large number of them, as anyone who has been around Washington knows, and they come here from all over the African continent. "I take a lot of taxis," she said, "and I ask the drivers if they've been to the museum, and I get mixed responses. Some drivers are enthusiastic and some aren't: for some it's a reminder of a past they would rather forget. But others like to celebrate their Africanness. Those are the ones who give me a break on the taxi fare!" she laughed.

Museum director Roslyn Walker wants to create exhibits that relate to people's lives.

Actually, local Africans more or less take over the museum on occasion, and this is what happened last spring when a group of Yoruba immigrants performed a baby-naming ceremony and some 2,000 visitors attended. "It was a visual extravaganza, winding all through the building with dancing and everything. We also have invited the wives of African ambassadors to the museum and encouraged them to bring their children. We want them to consider this a little bit of Africa in the District of Columbia, a home away from home."

Walker plans to set up traveling exhibitions to go with other Smithsonian mobile shows. A display of photographs by Constance Stuart Larrabee, a British-born South African who left a remarkable body of work depicting scenes of life in and around Pretoria and Johannesburg, is slated to become the African museum's first traveling exhibition.

And she wants to service the classrooms with educational products.

"You mean in the Washington area?" I said, like a fool.

She gave me a look. "Around the world! Why not? Certainly around the country. I don't mean artifacts, but educational materials—slide kits, CD-ROMs, or whatever current technological mediums can help teachers teach African arts and culture."

Last March in connection with the opening of a major show of sculpture by Yoruba artist Olowe of Ise (c. 1875-1938), the museum had a Family Day, attended by some 3,000 people. For Walker the best thing about it was that people didn't just stray into the building through the underground passageway from the adjoining Sackler Gallery, where heads fail to get counted among the museum's 240,000 annual visitors. They entered through the proper front door: they had

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intended to come to the African museum in the first place.

"That was the best fun. I'd love to have a family day for every new exhibition. We offered storytelling, dance performances, Yoruba and other African board games, as well as art workshops. After viewing the Yoruba beaded crown on exhibit, for example, visitors made beaded necklaces and other items in the workshops."

The activity room was put to work as never before. Four models showing stages of a sculpture in iroko wood, representing a kneeling female figure by Moses Ajiboye of Nigeria, were set out for people to touch and explore. Visitors often ask about the woods used in many African sculptures, Walker told me, so samples were provided of everything from red oak to pine, enabling people to heft them and note the grain.

"We showed how Yoruba style differs from other ethnic styles, and you could go through and compare Olowe's art with Olowe wannabes. One exercise was to identify a Yoruba sculpture from among a group by artists with similar styles."

One favorite project was to complete, on paper, a sculpted wooden door by Olowe that had been altered, possibly because of damage. What you had to do was imagine what the artist had intended and draw the rest of that door.

During the activities, a tape played of one of Olowe's wives singing a praise poem honoring the artist, and master drummers also provided music during this busy day. On other occasions, African potters and weavers have demonstrated their technique.

"We treated our visitors to a taste experience," she told me. "Chin-chin, cookies made from a sweetened, deep-fried dough that are popular in Nigeria, were served. We asked them to eat only in the pavilion, but of course they wandered around with the food, and we wound up picking up crumbs all over the place."

Like Western art, African art has its roots in religion. But as Walker pointed out, there have always been individual artists whose names were known in their societies. "African art was never anonymous," she said, "it was just that the collectors of art and cultural information rarely asked who made this or that. Often there was the assumption that art-making was a communal process, that everyone in the village was a cocreator.

Sokari Douglas Camp's motorized *Small Iriabo* claps its hands every half hour.

"But this was not the case. You always had individual master sculptors, artists who had their own ateliers, master carvers with wide-ranging reputations who were summoned from far away to work for this family or that king. The greater their talent, the greater their reputation. Artists weren't confined to one small area but crossed all borders."

Contemporary African art has branched out in new directions as has Western art," Walker reminded me. "In the past, African women pretty much stuck to the traditional media of pottery and fiber or textiles, but now we have Sokari Douglas Camp, a Nigerian woman who sculpts by welding steel. She has some marvelous kinetic sculptures on view in the museum's pavilion.

This spring, the museum's Point of View Gallery, which focuses on smaller exhibitions, exploring a few objects or even a single object in innovative ways, will showcase *Church Ede*, a monumental kinetic sculpture of a funerary bed by Sokari Douglas Camp. Made in honor of her father, it features figures that periodically fan the bed as would attendants to a real Nigerian funerary bed.

Some shows prove once again the extraordinary influence of African art upon the world's other artists. There was a display of furniture by Pierre-Emile Legrain, a French Art Deco master who died in 1929. His wonderful chairs and stools are clearly influenced by work from the Asante of Ghana, and particularly by a wood and brass creation from the Ngombe people of the Democratic Republic of the Congo.

Through May 9, the museum will feature "Baule: African Art/Western Eyes," which contrasts how Western museums present some of Baule's outstanding works with the way the Baule people experience art in their native environment.

I was impressed by a large exhibition, "Images of Power and Identity," which brings us African art south of the Sahara. These masks and figures, mostly of wood but a few of gold and silver, are bursting with vitality. A *mwadi* mask from the Democratic Republic of the Congo, four feet tall, with a raffia ruff at the base, eyeholes and a great striped fishtail crown, was worn by a diviner to celebrate the new moon. A 19th-century life-size

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There was a small decrease in the clearance of cetirizine caused by a 400-mg dose of theophylline; it is possible that larger theophylline doses could have a greater effect. **Carcinogenesis, Mutagenesis and Impairment of Fertility:** In a 2-year carcinogenicity study in rats, cetirizine was not carcinogenic at dietary doses up to 20 mg/kg (approximately 15 times the maximum recommended daily oral dose in adults on a mg/m² basis, or approximately 10 times the maximum recommended daily oral dose in children on a mg/m² basis). In a 2-year carcinogenicity study in mice, cetirizine caused an increased incidence of benign liver tumors in males at a dietary dose of 16 mg/kg (approximately 6 times the maximum recommended daily oral dose in adults on a mg/m² basis, or approximately 4 times the maximum recommended daily oral dose in children on a mg/m² basis). No increase in the incidence of liver tumors was observed in mice at a dietary dose of 4 mg/kg (approximately 2 times the maximum recommended daily oral dose in adults on a mg/m² basis, or approximately equal to the maximum recommended daily oral dose in children on a mg/m² basis). The clinical significance of these findings during long-term use of ZYRTEC is not known. Cetirizine was not mutagenic in the Ames test, and not clastogenic in the human lymphocyte assay, the mouse lymphoma assay, and in vivo micronucleus test in rats. In a fertility and general reproductive performance study in mice, cetirizine did not impair fertility at an oral dose of 64 mg/kg (approximately 25 times the maximum recommended daily oral dose in adults on a mg/m² basis). **Pregnancy Category B:** In mice, rats, and rabbits, cetirizine was not teratogenic at oral doses up to 96, 225, and 135 mg/kg, respectively (approximately 40, 180 and 220 times the maximum recommended daily oral dose in adults on a mg/m² basis). There are no adequate and well-controlled studies in pregnant women. Because animal studies are not always predictive of human response, ZYRTEC should be used in pregnancy only if clearly needed. **Nursing Mothers:** In mice, cetirizine caused retarded pup weight gain during lactation at an oral dose in dams of 96 mg/kg (approximately 40 times the maximum recommended daily oral dose in adults on a mg/m² basis). Studies in beagle dogs indicated that approximately 3% of the dose was excreted in milk. Cetirizine has been reported to be excreted in human breast milk. Because many drugs are excreted in human milk, use of ZYRTEC in nursing mothers is not recommended. **Geriatric Use:** In placebo-controlled trials, 186 patients aged 65 to 94 years received doses of 5 to 20 mg of ZYRTEC per day. Adverse events were similar in this group to patients under age 65. Subset analysis of efficacy in this group was not done. **Pediatric Use:** The safety of ZYRTEC, at daily doses of 5 or 10 mg, has been demonstrated in 376 pediatric patients aged 6 to 11 years in placebo-controlled trials lasting up to four weeks and in 254 patients in a non-placebo-controlled 12-week trial. The safety of cetirizine has been demonstrated in 168 patients aged 2 to 5 years in placebo-controlled trials of up to 4 weeks duration. On a mg/kg basis, most of the 168 patients received between 0.2 and 0.4 mg/kg of cetirizine HCl. The effectiveness of ZYRTEC for the treatment of seasonal and perennial allergic rhinitis and chronic idiopathic urticaria in pediatric patients aged 2 to 11 years is based on an extrapolation of the demonstrated efficacy of ZYRTEC in adults in these conditions and the likelihood that the disease course, pathophysiology and the drug's effect are substantially similar between these two populations. The recommended doses for the pediatric population are based on cross-study comparisons of the pharmacokinetics and pharmacodynamics of cetirizine in adult and pediatric subjects and on the safety profile of cetirizine in both adult and pediatric patients at doses equal to or higher than the recommended doses. The cetirizine AUC and C_{max} in pediatric subjects aged 2 to 5 years who received a single dose of 5 mg of cetirizine syrup and in pediatric subjects aged 6 to 11 years who received a single dose of 10 mg of cetirizine syrup were estimated to be intermediate between that observed in adults who received a single dose of 10 mg of cetirizine tablets and those who received a single dose of 20 mg of cetirizine tablets. The safety and effectiveness of cetirizine in pediatric patients under the age of 2 years have not yet been established. **ADVERSE REACTIONS** Controlled and uncontrolled clinical trials conducted in the United States and Canada included more than 6000 patients aged 12 years and older, with more than 3900 receiving ZYRTEC at doses of 5 to 20 mg per day. The duration of treatment ranged from 1 week to 6 months, with a mean exposure of 30 days. Most adverse reactions reported during therapy with ZYRTEC were mild or moderate. In placebo-controlled trials, the incidence of discontinuations due to adverse reactions in patients receiving ZYRTEC 5 or 10 mg was not significantly different from placebo (2.9% vs. 2.4%, respectively). The most common adverse reaction in patients aged 12 years and older that occurred more frequently on ZYRTEC than placebo was somnolence. The incidence of somnolence associated with ZYRTEC was dose related, 6% in placebo, 11% at 5 mg and 14% at 10 mg. Discontinuations due to somnolence for ZYRTEC were uncommon (1.0% on ZYRTEC vs. 0.6% on placebo). Fatigue and dry mouth also appeared to be treatment-related adverse reactions. There were no differences by age, race, gender or by body weight with regard to the incidence of adverse reactions.Table 1 lists adverse experiences in patients aged 12 years and older which were reported for ZYRTEC 5 and 10 mg in controlled clinical trials in the United States and that were more common with ZYRTEC than placebo. **Table 1. Adverse Experiences Reported in Patients Aged 12 Years and Older in Placebo-Controlled United States ZYRTEC Trials (Maximum Dose of 10 mg) at Rates of 2% or Greater (Percent Incidence) ZYRTEC (N=2034) Placebo (N=1612) respectively:** Somnolence (13.7 vs 6.3) Fatigue (5.9 vs 2.6) Dry Mouth (5.0 vs 2.3) Pharyngitis (2.0 vs 1.9) Dizziness (2.0 vs 1.2). In addition, headache and nausea occurred in more than 2% of the patients, but were more common in placebo patients. Pediatric studies were also conducted with ZYRTEC. More than 1300 pediatric patients aged 6 to 11 years with more than 900 treated with ZYRTEC at doses of 1.25 to 10 mg per day were included in controlled and uncontrolled clinical trials conducted in the United States. The duration of treatment ranged from 2 to 12 weeks. Placebo-controlled trials up to 4 weeks duration included 168 pediatric patients aged 2 to 5 years who received cetirizine, the majority of whom received single daily doses of 5 mg. The majority of adverse reactions reported in pediatric patients aged 2 to 11 years with ZYRTEC were mild or moderate. In placebo-controlled trials, the incidence of discontinuations due to adverse reactions in pediatric patients receiving up to 10 mg of ZYRTEC was uncommon (0.4% on ZYRTEC vs. 1.0% on placebo). Table 2 lists adverse experiences which were reported for ZYRTEC 5 and 10 mg in pediatric patients aged 6 to 11 years in placebo-controlled clinical trials in the United States and were more common with ZYRTEC than placebo. Of these, abdominal pain was considered treatment-related and somnolence appeared to be dose-related, 1.3% in placebo, 1.9% at 5 mg and 4.2% at 10 mg. The adverse experiences reported in pediatric patients aged 2 to 5 years in placebo-controlled trials were qualitatively similar in nature and generally similar in frequency to those reported in trials with children aged 6 to 11 years. **Table 2. Adverse Experiences Reported in Pediatric Patients Aged 6 to 11 Years in Placebo-Controlled United States ZYRTEC Trials (5 or 10 mg Dose) Which Occurred at a Frequency of ≥ 2% in Either the 5-mg or the 10-mg ZYRTEC Group, and More Frequently Than in the Placebo Group. ZYRTEC 5 mg (N=161), 10 mg (N=215) vs placebo (N=309):** Headache (11.0%, 5 mg; 14.0%, 10 mg; 12.3%, placebo); Pharyngitis (6.2%, 5 mg; 2.8%, 10 mg; 2.9%, placebo); Abdominal pain (4.4%, 5 mg; 5.6%, 10 mg; 1.9%, placebo); Coughing (4.4%, 5 mg; 2.8%, 10 mg; 3.9%, placebo); Somnolence (1.9%, 5 mg; 4.2%, 10 mg; 1.3%, placebo); Diarrhea (3.1%, 5 mg; 1.9%, 10 mg; 1.3%, placebo); Epistaxis (3.7%, 5 mg; 1.9%, 10 mg; 2.9%, placebo); Bronchospasm (3.1%, 5 mg; 1.9%, 10 mg; 1.9%, placebo); Nausea (1.9%, 5 mg; 2.8%, 10 mg; 1.9%, placebo); Vomiting (2.5%, 5 mg; 2.3%, 10 mg; 1.0%, placebo).The following events were observed infrequently (less than 2%), in either 3982 adults and children 12 years and older or in 659 pediatric patients aged 6 to 11 years who received ZYRTEC in U.S. trials, including an open adult study of six months duration. A causal relationship of these infrequent events with ZYRTEC administration has not been established. **Autonomic Nervous System:** anorexia, flushing, increased salivation, urinary retention. **Cardiovascular:** cardiac failure, hypertension, palpitation, tachycardia. **Central and Peripheral Nervous Systems:** abnormal coordination, ataxia, confusion, dysphonia, hyperesthesia, hyperkinesia, hypertonia, hypoesthesia, leg cramps, migraine, myelitis, paralysis, paresthesia, ptosis, syncope, tremor, twitching, vertigo, visual field defect. **Gastrointestinal:** abnormal hepatic function, aggravated tooth caries, constipation, dyspepsia, eructation, flatulence, gastritis, hemorrhoids, increased appetite, melena, rectal hemorrhage, stomatitis including ulcerative stomatitis, tongue discoloration, tongue edema. **Genitourinary:** cystitis, dysuria, hematuria, micturition frequency, polyuria, urinary incontinence, urinary tract infection. **Hearing and Vestibular:** deafness, earache, ototoxicity, tinnitus. **Metabolic/Nutritional:** dehydration, diabetes mellitus, thirst. **Musculoskeletal:** arthralgia, arthritis, arthrosis, muscle weakness, myalgia. **Psychiatric:** abnormal thinking, agitation, amnesia, anxiety, decreased libido, depersonalization, depression, emotional lability, euphoria, impaired concentration, insomnia, nervousness, paroniria, sleep disorder **Respiratory System:** bronchitis, dyspnea, hyperventilation, increased sputum, pneumonia, respiratory disorder, rhinitis, sinusitis, upper respiratory tract infection. **Reproductive:** dysmenorrhea, female breast pain, intermenstrual bleeding, leukorrhea, menorrhagia, vaginitis. **Reticuloendothelial:** lymphadenopathy. **Skin:** acne, alopecia, angioedema, bullous eruption, dermatitis, dry skin, eczema, erythematous rash, furunculosis, hyperkeratosis, hypertrichosis, increased sweating, maculopapular rash, photosensitivity reaction, photosensitivity toxic reaction, pruritus, purpura, rash, seborrhea, skin disorder, skin nodule, urticaria. **Special Senses:** parosmia, taste loss, taste perversion **Vision:** blindness, conjunctivitis, eye pain, glaucoma, loss of accommodation, ocular hemorrhage, xerophthalmia. **Body as a Whole:** accidental injury, asthenia, back pain, chest pain, enlarged abdomen, face edema, fever, generalized edema, hot flashes, increased weight, leg edema, malaise, nasal polyp, pain, pallor, periorbital edema, peripheral edema, rigors. Occasional instances of transient, reversible hepatic transaminase elevations have occurred during cetirizine therapy. Hepatitis with significant transaminase elevation and elevated bilirubin in association with the use of ZYRTEC has been reported. In foreign marketing experience the following additional rare, but potentially severe adverse events have been reported: anaphylaxis, cholestasis, glomerulonephritis, hemolytic anemia, hepatitis, orofacial dyskinesia, severe hypotension, stillbirth, and thrombocytopenia. **DRUG ABUSE AND DEPENDENCE** There is no information to indicate that abuse or dependency occurs with ZYRTEC. **OVERDOSAGE** Overdosage has been reported with ZYRTEC. In one adult patient who took 150 mg of ZYRTEC, the patient was somnolent but did not display any other clinical signs or abnormal blood chemistry or hematology results. In an 18 month old pediatric patient who took an overdose of ZYRTEC (approximately 180 mg), restlessness and irritability were observed initially; this was followed by drowsiness. Should overdose occur, treatment should be symptomatic or supportive, taking into account any concomitantly ingested medications. There is no known specific antidote to ZYRTEC. ZYRTEC is not effectively removed by dialysis, and dialysis will be ineffective unless a dialyzable agent has been concomitantly ingested. The acute minimal lethal oral doses were 237 mg/kg in mice (approximately 95 times the maximum recommended daily oral dose in adults on a mg/m² basis, or approximately 55 times the maximum recommended daily oral dose in children on a mg/m² basis) and 562 mg/kg in rats (approximately 460 times the maximum recommended daily oral dose in adults on a mg/m² basis, or approximately 270 times the maximum recommended daily oral dose in children on a mg/m² basis). In rodents, the target of acute toxicity was the central nervous system, and the target of multiple-dose toxicity was the liver

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figure of a man from Cameroon, sporting thousands of beads and shells, exudes both power and humor, as does a crocodile headdress with huge spiraling horns.

And this summer, the museum will display some of the most beautiful and creative types of headgear contained in the collection in "Hats Off: A Salute to African Headgear."

The Sylvia H. Williams Gallery, named for the museum's former director and dedicated to contemporary art, will showcase a major concentration of South African art, running from June to September and complementing the South African component of the Folklife Festival on the Mall. The exhibition should bring swarms of visitors into the museum, many of whom perhaps have no idea of the extent and variety of African art.

An upcoming series, "Films from Côte d'Ivoire," will include works by directors from this hub of African filmmaking that have been distinguished at major film festivals around the world. The museum will also offer a special conservation clinic for the public, a film and talk on African art trading, plus performances by dancers and musicians from the Ivory Coast.

Walker, who earned her master's degree and doctorate from Indiana University, has worked with African art most of her 54 years, having long served as senior curator at this, the only museum in the country dedicated exclusively to the collection, conservation, exhibition and study of African art. For seven years before coming here she was director of the Illinois State University Museums at Normal.

Though her father, a Memphis pharmacist, died when she was 6 and her mother when she was 14, she was still raised by relatives. "I did have a family," she said. "My mother's youngest sister, Jim Etta Lee, and her husband, Uncle Robert, raised me. He died when I was in graduate school, but I have been fortunate in having mentors. I've had a lot of support from family, friends, teachers, and scholars and professionals in the museum field."

Early on, at Southern University's Laboratory High School, she thought she might become a journalist but was also interested in painting and the flute. Teachers encouraged her. In fact, one teacher thought so much of Walker's artwork that she saved it. This was the kind of loving help that enabled this talented young person to carry on.

After graduate school she worked at the Nigerian National Museum in Lagos and the Institute of African Studies at the University of Ibadan in Nigeria.

She is passing along to others the same kind of support that she has had. The museum takes on interns and museum fellows every year. "We mentor them," she said. "We stay in contact with them and try to push them along. We are training another generation of scholars and museum professionals who will continue to help the Western world rediscover Africa's treasures, who will keep Africa on the minds of the public."

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THE OBJECT AT HAND

Paderewski's Piano

WHEN POLISH PIANIST IGNACE PADEREWSKI TOURED AMERICA, HE BECAME A CELEBRITY—AND BOOSTED STEINWAY

BY DAVID TAYLOR

ITS GLEAMING BLACK FRAME PERCHES WITH DIGNITY on three fluted columns. The ivories are white, all bloodstains now carefully removed. Only the inscription under the lid of Steinway concert grand No. 71227 at the National Museum of American History—a few words in black ink scrawled onto gilt metal—bears testimony to a trying musical tour and the great musician who survived it: "This piano has been played by me during the season 1892-1893 in seventy-five concerts. I. J. Paderewski."

This 1892 Steinway concert grand piano was the top of the line when it made a 75-concert tour with Ignace Paderewski.

Today Paderewski is often recalled not for his music but for his famous epigram about diligence: "If I don't practice for one day, I know it; if I don't practice for two days, the critics know it; if I don't practice for three days, the audience knows it." By 1892, though, Paderewski was more than a great pianist; he was a mass-market wonder who inspired ad campaigns for shampoos, candy, soaps and party treats, even a windup toy of a little man frenetically pounding his little piano. "Paddymania," a London newspaper gasped, "has reached such heights that three New York ladies have embroidered musical phrases from [his] *Minuet* on their stockings."

Paderewski's triumphal assault on America started with a recommendation to William Steinway from an agent in London, urging him to sign a young Polish pianist for a U.S. tour. Ignace himself arrived in New York on November 1891, only to be gloomily greeted at dockside by Steinway representative Charles Tretbar bearing grim tidings. "You have had brilliant successes in London and Paris," Tretbar declared, "but let me tell you, Mr. Paderewski, you need not expect anything like that here in America. . . . We are not easily pleased here." Famous last words.

A grueling schedule put Paderewski through 107 concerts in just 117 days. Concerts often lasted for hours, but they included encores to appease the roaring applause. In an era when solo piano recitals were uncommon, Paderewski packed concert halls everywhere he went. But the tour nearly ended his career. In Rochester, New York, he walked onto the stage and struck the opening chords of Beethoven's *Appassionata*. Immediately, a scorching pain shot up his right arm as if something had shattered. He kept playing and managed to finish the concert. But he had seriously injured his hand on the stiff hammer action of the Steinway. He had often complained lightly about the "dangerous" action, cheerfully referring to the piano as "my enemy." But after Rochester he played in constant pain, needing massages and jolts of electricity before concerts just to get his injured finger to move. Doctors warned of permanent damage, but Paderewski insisted on honoring his pledge, even though it meant teaching himself to play with just four fingers of his right hand. He never recovered full use of his ring finger.

But the 1891-92 tour was a tremendous boon for Steinway & Sons, which had been thriving ever since Heinrich Steinweg left Seesen, Germany, in 1850 and settled his piano-making business in New York City. Piano technology was a growth industry, and the Steinways were at the hot center. Tinkerers had been improving on Bartolomeo

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Much loved for his wild hair and impassioned style, Paderewski sometimes played so strenuously that he hurt himself.

Cristofori's pianoforte since the early 1700s. Heinrich's son, Henry Jr., opened the lid on every piano he came across, looking for new ideas, among them the use of a cast-iron frame for holding heavy-gauge strings under enormous tension, which gave a more brilliant and powerful sound. Henry improved the metal frame's shape, rearranged the strings for a richer tone, made the soundboard more vibrant and improved the piano's responsiveness to the musician, logging seven patents in the process. By the time of his death in 1865 at 34, he'd essentially created the modern piano. His brother Theodor filed another 45 patents.

Each Steinway concert grand that emerged from the original factory in Manhattan was a masterpiece of some 40,000 parts, including screws, and the product of 300 craftsmen.

In their advertising, the Steinways capitalized on Americans' love of technology, but for renown, they set their sights on demonstrations at Europe's great expositions, which also functioned as trade shows. Pianists played each piano on display, and judges awarded prizes for quality. National pride was often at stake. At the 1867 Paris Exposition, the Steinway competed with more than 400 pianos and took a gold medal. The Steinway triumph shifted the center of piano making from Europe to the New World. In 1890, Steinway & Sons made more than 2,300 pianos, part of a national industry that produced more than 150,000. From its roots as an amusement for the rich, the piano had become a token of respectability for all households, and the home entertainment center of the late 1800s.

After Henry Jr.'s death, it was brother William Steinway, more than Theodor, who saw that artists' endorsements could broaden the market further. William started as the "bellyman" of the business—the person who installed the soundboard—and ended as a captain of industry. He paid touring musicians well but imposed a factory-like schedule on their performances. The tour he set in 1872 for the legendary Russian pianist Anton Rubinstein left Rubinstein swearing never to return to America. Paderewski, despite his injuries, found a second Steinway tour irresistible.

Paderewski was an exotic 32-year-old European widower whose poverty-stricken childhood was romantically embellished by ancient connections to nobility. He was no brooding artist, however, but a man with a disarming sense of humor. His appearance cast a spell of its own: pale, even features, dramatic cheekbones and an unruly mane of reddish-gold hair. Acquaintances often likened his effect to electricity. "He is electric as life," said one woman. Another pianist marveled at how Paderewski's "presence illuminated that room . . . as though a blinding light had been turned on." The press seized on his dramatic plumage as a focus: a Philadelphia hack wrote, "It was only a feather duster / But she worshiped it, she said, / For its fascinating likeness / To Paderewski's head." "There's Music in the Hair!" chortled a New York headline. "Matinee Girls on Rampage!" warned another.

The eye of the storm was a deeply insecure performer who had begun formal study late, with a fingering technique that made his piano teachers groan. A London reviewer named George Bernard Shaw caught Paderewski's first concerts in London and alternated between scorn and praise. Shaw mockingly hailed "the immensely spirited young harmonious blacksmith" and his playing as "a brutal fantasia on the theme of the survival of the fittest." But Shaw also conceded Paderewski's genius for interpretation. Other critics agreed. "There are many persons who shun piano recitals as intolerable bores," wrote Henry Finck, music critic for the New York *Evening Post*, "but who never miss a Paderewski concert because when he plays, Bach and Beethoven are no longer riddles to them but sources of pleasure."

Paderewski launched his second American tour in late 1892 on a Steinway with improved action. This time around, he enjoyed his own private railcar with room for his secretary, valet, piano tuner, manager, chef and two porters. Crowds gathered at railroad crossings for a glimpse as he passed. He, in turn, was fascinated by his American audiences, who greeted him as "Paderooski" instead of "Paderevski." In Kansas City, he marveled as several hundred Texans arrived, all clutching volumes of music. "They crowded the hotels," he recalled later, "they gathered in clusters at the street corners, and they stood in line in front of the box office—all with their music in

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hand." He ate nothing on the day of a performance and worked out with dumbbells every morning. He practiced endlessly as well, to quell his nervousness.

There were some trials, too. Because nothing could keep him from the concert stage long enough for it to heal, a scratched finger grew infected under the relentless pressure of playing. During a performance the bandaged finger opened and blood seeped onto the keyboard. "I soon got accustomed to it," he admitted. "During the rest of that tour . . . the keyboard was always red when I finished."

That tour netted him a princely $160,000. After four extra concerts to benefit charities, he was ready to return to Europe, only pausing long enough to play at the opening of the Chicago World's Fair, generously offering to forgo his fee as a tribute to his affection for bustling Chicago. That proved a mistake.

Paderewski, fourth from left, and his second wife, Helena, stand on the platform of their private railcar during a 1900 American tour. He slept, ate, practiced and traveled in the car.

Chicago's piano makers prided themselves on their superiority to East Coast outfits like Steinway and hoped that the fair's piano competition would prove their point. That seemed likely, since the contest was to be decided by just one judge: Florenz Ziegfeld, father of the Ziegfeld Follies impresario and head of the Chicago Musical College. As it happened, Chicago piano mogul W. W. Kimball sat on the board of Ziegfeld's college. The Steinways and other Eastern piano makers were outraged by this plan and caused a fuss by pulling out of the competition. Midwestern pianos, the *New York Times* sniped, "will sound much better when they are not compared with the pianos of Boston and Baltimore and New York." Chicagoans responded by banning from the fair's stages any piano *not* entered in the contest. And that ran smack into Paderewski's agreement to play only Steinways.

With rumors flying and just days before President Grover Cleveland was to inaugurate the fair, Paderewski held firm. "Throughout the wide world, any artist is permitted to use the instrument of his choice," he announced, "and I do not understand why I should be forced to play an instrument of a manufacturer strange to me." Negotiations were still angrily proceeding when he reached the fairgrounds. Attempts to solve the piano stalemate embroiled a national commission and a piano committee and gave rise to some hopeless suggestions, one being that during his performance Paderewski rotate between several onstage pianos. On the morning of the day of the opening concert, fair officials decreed that the Music Hall was separate from the official Chicago World's Fair and so not bound by its rules. Paderewski could play his Steinway.

Still nursing an infected finger, he took the stage. Wind whipped through the unfinished hall. William Steinway, confined to a sickbed in New York, had followed Paderewski's progress by cables. His May 2 diary entry notes proudly, "Paderewski played at the Chicago Fair on Steinway grand in spite of all the opposition." Days later Paderewski sailed back to Europe. In his wake, he left a swirl of Steinway condemnations in the Chicago papers, and crowds that stretched around the block to see the piano he had played, which was on view in the Chicago Steinway dealership.

In his future, which lasted until 1941, when he died at 80, lay an even greater career as statesman—and patriot. He was Poland's premier in 1919 and the revered elder statesman of the Polish government in exile, defending the hopes of his country, overrun by Nazi and Soviet armies, with the same fiery determination and passion he had brought to his brilliant American piano tours.

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Paintings of a Windblown Land

EVERY DAY—FROM MIDMORNING UNTIL after nightfall—harsh winds rush up the world's deepest mountain valley and scour Mustang, a barren region high in the rain shadow of the Himalayas. Above are watercolors of Mustang by Robert Powell. At top left he has painted symbolic clay colors and skulls, ritual devices that people hope will save them from demons believed to haunt this hostile land; precious wood is carefully stacked on the parapet, for protection from theft and as a sign of wealth. Also depicted are the red cliffs of Drakmar, pocked with prehistoric caves; and an imaginary shrine to a tree spirit, with offerings of animal horns and red clay. "Behind the Himalayas: Paintings of Mustang" is on view at the Sackler Gallery until September 26 and, in part, at www.smithsonianmag.si.edu. —*Bruce Hathaway*

SMITHSONIAN HIGHLIGHTS

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Kites!

Smithsonian Kite Festival 1999 (March 27; rain date March 28) This annual kite festival, one of the kite world's largest and widely regarded as the most prestigious, is in its 33rd year. The 1999 festival theme, "A Century of Flight: Looking Back," honors the centennial of Orville Wright's historic

1899 kite. Special consideration in this year's theme award will be given to entrants in appropriate period costumes. Prizes will also be awarded for many categories such as "beauty," "patriotic," "figure" and "stunt." For information on the festival and the many other Smithsonian Associates Programs, call 202-357-3030, or visit www.si.edu/tsa.

Paul Robeson

Son of an escaped slave, Paul Robeson (1898-1976) is known best as a singer and movie star. Through 150 photographs, prints, paintings, personal memorabilia and audio clips, "Paul Robeson: Artist and Citizen" also presents lesser-known aspects of his life—his days as an all-American football player and Phi Beta Kappa graduate of Rutgers University, his brief career as a lawyer, and the political activism that caused him to be condemned as a Communist sympathizer during the Cold War. After closing at the National Portrait Gallery on April 18, the exhibition will tour in 1999 and 2000.

Smithsonian Website

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Another place to start finding out about the exhibitions, events, publications, programs and activities of the Smithsonian is our Website. There you will find the *Highlights Calendar* with links to the many pages of the Smithsonian Institution Website.

Exhibitions, Events

NATIONAL MUSEUM OF AMERICAN HISTORY

Communities in a Changing Nation: The Promise of 19th Century America This new permanent exhibition explores the promise of America in the 1800s through the experiences of three different communities. Visitors will walk through the industrial era in Bridgeport, Connecticut, relive the Jewish immigrant experience in Cincinnati, Ohio, and witness slavery and freedom among African-Americans in Charleston, South Carolina.

The Feather Trade and the American Conservation Movement In recognition of the centenary of the movement, this exhibition (also in virtual form on the NMAH Website) explores the turn-of-the-century fad for feathered hats and its effect on wild bird populations.

NATIONAL MUSEUM OF NATURAL HISTORY

The newly opened Rocks Gallery completes the installation of the Janet Annenberg Hooker Hall of Geology, Gems and Minerals.

Tigers!, a new diorama, is presented with the National Zoological Park's *Great Cats* hill, featuring *Tiger Tracks*, an interpretive trail for children.

HIRSHHORN MUSEUM & SCULPTURE GARDEN

Directions: Julião Sarmento: Fundamental Accuracy (through June 20) New figurative paintings and sculptures by this Portuguese artist, who was the hit of the 1997 Venice Biennale.

The Hirshhorn Collection at 25 In celebration of the museum's 25th anniversary, a floor-wide reinstallation, in renovated galleries, of works by Hopper, de Kooning, Giacometti and other modern-art favorites. Central to the anniversary year is a major exhibition, opening in October, "Regarding Beauty."

COOPER-HEWITT, NATIONAL DESIGN MUSEUM
[NEW YORK CITY]

Graphic Design in the Mechanical Age: Selections from the Merrill C. Berman Collection (through May 23) Posters, paintings, drawings and collages created between the two world wars.

NATIONAL POSTAL MUSEUM

Mayhem By Mail Explores three categories of crime investigated by U.S. Postal Inspectors.

As Precious as Gold The importance of letters from home during the Alaska/Klondike gold rush.

What's in the Mail for You! High-tech interactive exhibit about the direct mail industry.

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Baule: African Art/Western Eyes (through May 9) Exhibition of more than 150 works by Baule artists of the

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Tracking America's First Dog

CAROLINA DOGS, DISCOVERED IN THE SOUTHEAST WOODS, MAY PROVIDE CLUES TO THE PRIMITIVE DOGS THAT ARRIVED WITH THE FIRST HUMANS IN AMERICA

IT'S NOT OFTEN THAT a registered breed of dog starts with a castoff that even the pound didn't want and a stray plucked out of the woods. But it is even less likely that such animals would provide one of those rare "Eureka!" moments in science, drawing back the curtain on both evolution and human culture, and providing clues to the mysterious origins of the long, fruitful partnership that exists between humans and canines.

And yet, that's exactly what happened with the shy enigma of a creature known as the Carolina dog, which just may be a remnant of the first animals to accompany humans across the Bering land bridge to North America thousands of years ago. Then again, it may be nothing more than a modern mutt; no one is exactly sure, and the genetic evidence, while suggestive, is thus far inconclusive. Regardless, the Carolina dog and several other demonstrably primitive canids, some nearing extinction, are part of a controversial reexamination of how modern dogs arose, and even more fundamental questions about the process of domestication itself.

If you passed a Carolina dog on a back road in the humid South Carolina Low Country, where stands of tall longleaf pine alternate with crop fields and cypress swamps, chances are you wouldn't spare it a glance—it would seem to be just a scrawny, medium-sized mongrel with a reddish-yellow coat, upright ears and a whiplash tail curling up over its back, what rural Southerners have long called a "yaller" dog. And for years, that's all I. Lehr Brisbin, Jr., thought they were, too.

Brisbin—"Bris" to his colleagues at the Savannah River Ecology Lab (SREL) in Aiken, South Carolina—saw these skittish feral dogs from time to time. Brisbin is a senior ecologist on the

sprawling Savannah River Site, a huge nuclear reservation carved out of the local farmland in the 1950s by the federal government, which built reactors there for the defense program. The reactors are shut down now, and the Savannah site—310 square miles of mostly forest and wetlands—is a National Environmental Research Park. Fenced off with barbed wire and closed to the public, it is a fertile haven for wildlife despite some areas with residual radioactivity.

Brisbin, a trim man in his late 50s with bottomless energy, is a polymath with professional interests that range from alligators and box turtles to wood storks and furbearers. His graduate work on the bioenergetics of reptiles and birds first led him to study red junglefowl, the ancestors of modern chickens. And that sparked a curiosity about the process of domestication in animals, which in turn meshed neatly with his lifelong passion for dogs and dog training.

And that led him, eventually, to Horace and Marion.

Horace was a stray, white with brown markings, found wandering in the late '70s on the boundary of the Savannah River Site. There wasn't anything terribly special about him—he seemed just a typical rural mutt of the sort you'd find chained to back porches and doghouses from the Carolinas to Texas. Brisbin, whose specialty at the time was training American Staffordshire terriers and bloodhounds, added Horace to his kennel of show dogs, and for several years didn't spare him much more thought.

Which is a little odd, because Brisbin was beginning to think about feral dogs. Early in his research on domestication, he became fascinated by the origins of truly wild dogs, like the dingo in Australia (p. 54), a honey-gold dog believed to have come to the island continent with humans about 4,000 years ago. He

Little Sister (top), a wild-caught alpha female of a captive Carolina dog pack, rears up over tall grass to spot her prey before being joined by her son Sam (below, in the background) during a hunt.

wondered whether the dogs that came to North America with humans might have been similar to dingoes, and he studied the archaeological and anthropological evidence. And he spent his spare time learning about the so-called pariah dogs of the Old World, which share traits with dingoes.

In many corners of Europe, Asia and Africa, on the margins of human civilization, there are dogs lurking in the shadows—not pampered house pets, but untamed, often malnourished animals scavenging for scraps and garbage, avoiding people, surviving on the edge between wild and tame. Regardless of the setting—Afghanistan, Korea, Malaysia, the Papua New Guinea highlands—they frequently share common attributes: shorthaired coats that may be multicolored but are often ginger, curled tails, erect ears and foxlike faces. In India these animals are called pariahs, after the low-ranking social caste, and that name has come to be applied to such populations elsewhere. In fact, Brisbin has defined a "pariah niche," a pervasive canine lifestyle that revolves around scavenging garbage near human settlements.

One winter day several years after Horace arrived, Brisbin had him out for a run with his other, pedigreed dogs. That day, for some reason, Brisbin looked beyond Horace's piebald coat to his shape and proportions, and it struck him that the dog looked just like a dingo, like the pariahs halfway around the world. "At that moment everything just fell into place," he says now, 20 years later.

Brisbin realized that he'd been seeing dogs that looked like dingoes for years, roaming the woods of the Savannah River Site, often turning up in the traps he'd set as part of his regular furbearer surveys. On a hunch, he drove that day to an animal shelter just to see if they had more of these dingo-like dogs. Sitting in a kennel,

with only her head poking out of a box, was a dog that looked like she had stepped out of the Australian outback.

The shelter operators thought Brisbin was crazy for taking the untamed animal, but they were also glad to find a home for such a thoroughly

That day it struck him that the dog looked just like a dingo, like the pariah dogs halfway around the world.

ary War. And while she has never become his "little one," she did learn to accept and tolerate him, the same way an aloof cat tolerates its owner, respectful but always distant, preserving her space and dignity.

Today, Marion is a 14-year-old

Carolina dog breeder Jane Gunnell calls each of her dogs by name to receive a treat of bread soaked in bacon grease at Banbury Cross Farm, near Aiken, South Carolina.

unadoptable dog. "So they go into the doghouse with a noose pole and drag her out screaming, spread-eagled, leaving claw marks through the kennel, and put her, urinating all over herself, into this cage in the back of my car. And I was handed a card, which I have to this day." Bris shakes his head and laughs. "It's got this little dog face, and it says, 'We are pleased you found room in your heart and your home to adopt this "Little One"'—who was yelping in my cage, shaking like a leaf—'who comes fully guaranteed to love, protect and be loyal to you as long as it lives.'"

"And you know, ironically, she has," he says. Brisbin named the dog Marion, after Gen. Francis Marion, the "Swamp Fox" of the Revolution-

matriarch, her coat somewhat threadbare, her muzzle gray and her eyes cloudy, her gait stiff and arthritic. But she retains some of the wildness that marked her early life; even around Brisbin she is shy and at a remove. A visitor who sits for a long time, pretending that he has no interest in her, may receive a careful sniff at his knee—but if he reaches to stroke her

scarred muzzle she pulls back, not in alarm but maintaining distance.

Brisbin acquired more of these feral pariahs, which he'd taken to calling Carolina dogs, from shelters and from the wild in South Carolina and Georgia. A number of them came from land surrounding large federal reservations, like Fort Gordon near Augusta, where much of the terrain remains undeveloped and undisturbed. Brisbin kept his Carolinas in a complex of kennels in an 18-acre enclosure where they could roam in the woodlots and fields. They started producing puppies—and surprises.

Carolinas dig "snout pits," small, conical depressions in the dirt that exactly fit the dogs' muzzles.

Regardless of their origin, the Carolinas did things never before observed in domestic dogs. They had peculiar breeding cycles, starting with a rapid-fire, thrice-annual estrus in young females (perhaps a way to ensure quick breeding before diseases like heartworm took their toll) that later settled into seasonal reproductive cycles peaking in spring and late summer—the period, Brisbin notes, when small mammals are most abundant. Some pregnant females dug elaborate underground dens in which to give birth, unlike most domestic dogs, which usually just crawl under a porch or into a handy pile of brush. When she was in estrus or after her puppies were born, a captive female would carefully cover her excrement by scraping sand over it with her nose.

To Brisbin's bafflement, the animals also dug what he calls "snout pits," hundreds of small, conical depressions in the dirt that exactly fit the dogs' muzzles. Most snout pits are dug by females, between September and January. The dogs seem to be eating something, "but when I pull them out and look, there's never anything there," Brisbin says. They are particular about where they dig, and Brisbin can only conclude they're eating the soil itself, perhaps for its minerals.

With time, Bris became convinced he had stumbled onto something unique. The size, shape, color and behavior of the Carolina dogs, so similar to the the traits of other primitive canids, suggested they might be a relic of the first dogs to enter the region.

I. Lehr Brisbin, Jr., is the only person who can go eye-to-eye with shy Marion, his first female Carolina dog and the 14-year-old matriarch of the pack.

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He compared their skulls with those of Indian dogs from 2,000-year-old archaeological digs at Savannah River; they were similar, but there was too much individual variation among the fossils to be certain.

But the fact that Carolina dogs are most often found in wild, swampy, sparsely settled regions, instead of more heavily populated areas where stray dogs are most common, is a strong indication to Brisbin that these are more than just mongrels. Others agree; Bris has convinced both the American Rare Breeds Association and the United Kennel Club to recognize the Carolina dog. As with any registered breed, there is now a Carolina dog studbook to document and control breeding, and Brisbin's animals have even started winning "best in show" at multiple-breed dog shows.

They are, of course, individuals. There are Lucy and Cici, both captured as wild pups, who vanish down their den holes before a stranger even steps from Brisbin's car. Dibble, the dominant female of the pack, is a bit standoffish, but Bo Pup, an adolescent, is all over me in seconds with openmouthed greetings. Surrey is a medium-sized female, daughter of Horace and Marion; Morgan is a solid, friendly chap whose drop ears belie his Carolina dog genes.

If Marion is emblematic of a pariah dog's ancestral shyness, Taz is the polar opposite: a Carolina dog deeply, passionately, enthusiastically in love with people. He's Brisbin's home dog, a white-and-tan whose parents were both taken from the wild. Bris is bringing him up through the ranks of obedience training, aiming for the highest level. On the lead, Taz reacts instantly to hand and voice signals, but when the leash comes off as we walk in the woods, he vaults up steep banks with ease, and scrambles out on fallen tree trunks that span 20-foot-deep gullies.

Girl, left, a wild-caught Carolina whose DNA is being studied to compare her breed with other primitive dogs, stands with her occasional mate Zebe.

On an oppressive June evening, with the temperature still above 100 degrees Fahrenheit and the sun a fierce red ball in the western sky, I walk with Bris and a dozen or so Carolinas across Banbury Cross Farm, near Aiken. The dogs lope easily ahead of us, the low sun backlighting them, creating little moving nimbi of gold. Billy Morgan Benton, a big, outgoing man with dark hair slicked back wet under his cap, whistles to his pack; he and farm owner Jane Gunnell breed the dogs here, working with Brisbin to establish the Carolina dog as a domestic pet. They are frolicsome, friendly animals, Gunnell says, but out in the wooded nooks and weedy fields of the farm, their primitive traits become obvious.

The dogs are ginger, a red-brown that fades to pale buff on the flanks and belly, the same color as fallen pine needles and dead grass. They fan out through a low scrubby field, moving into the damp breeze, zigzagging and coursing with their noses low and their curved tails at half-staff. Suddenly one dog makes a sidestep, its supple neck arching; the tail snapping high, the longer, whiter hairs along its underside flaring, reminding me of a deer.

The effect on the rest of the pack is electric. Within seconds, all the dogs converge on the spot, tails moving like semaphore flags. One plunges its head into the grass with the speed of a heron's stab, but it misses. Something small skitters through the weeds, and another dog leaps, coming down with mouth and front feet together, a predatory exclamation mark—*Bam*! There is a tiny squeak, and the mouse vanishes in one gulp.

"I would suggest that you're watching a reenactment of a dog pack out hunting 8,000 years ago," Brisbin says. While he doesn't claim that Carolina dogs are direct, genetically pure descendants of the original dogs that crossed the land bridge, he believes that they re-create their look and behavior.

"The Carolina dog is a hypothesis," he says. "A hypothesis that there still exists in certain parts of the United

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States, most likely in relatively uninhabited broad expanses of natural habitat within the Southeast, remnant groups of dogs whose morphological, behavioral, ecological and genetic traits may approximate those of the first dogs to enter North America.

"It's all part of the package. Morphology and behavior go hand in hand," Brisbin says, gesturing to the lean shape of a nearby dog snuffling through the underbrush. That sinuous, blue-heron neck doesn't seem relevant without the pointed muzzle for stabbing at prey, and the upright ears for sharp hearing, and the long tail with its pale underside for signaling to the rest of the pack. Whether the Carolina dog is an ancient holdover or a modern throwback, its shape and behavior make a lot of evolutionary sense.

Genetics may tease out the origins of the Carolina dog, but so far the results are mixed. Recently, Brisbin and his colleague Travis Glenn, a molecular geneticist at SREL, have been looking at the mitochondrial DNA (mtDNA) of Carolina dogs—the genetic material passed down through the maternal line, and a potent gauge of relationships among animals.

A 19th-century painting depicts Mohawk chief Thayendanegea, who fought with the British in the Revolutionary War, and his dog, a breed raised and traded by the Iroquois.

When the mtDNA from Carolina dogs, dingoes, singing dogs and a variety of domestic breeds are compared, a phylogenetic tree—a sort of family tree showing their relationships—can be made. In this tree, the Carolina dogs tended to clump together near the base, an intriguing though tentative result that suggests the Carolina dogs may possess primitive genetic traits.

"Most of the dogs coming out at the base of the tree are Carolina dogs or dingoes," Glenn says. "If there were no basis to the argument that Carolinas are primitive, they'd be all over the tree, but they're grouped together." Glenn, who had initially assumed the Carolinas were just domestic dogs, admits he was stunned when he saw the results. "I had to go out for a beer."

Brisbin is cautious in interpreting the results, especially since the mtDNA sequences of some domestic dogs also grouped with the Carolinas at the base of the tree. "It's interesting that at a preliminary stage, most all of the Carolina dogs turned out to be primitive"—but so did boxers, German shepherds and Labrador retrievers, among others. It will take more research to sort out exactly what secrets are hiding in the "yaller" dog's genes.

The Carolinas are part of what Brisbin calls "the great arc of the red dog," the worldwide distribution of pariah canids. From their probable point of evolution somewhere in Southwest Asia or the Middle East, the ancestors of today's domestic dogs spread out in tandem with humans into Africa; and southeast through

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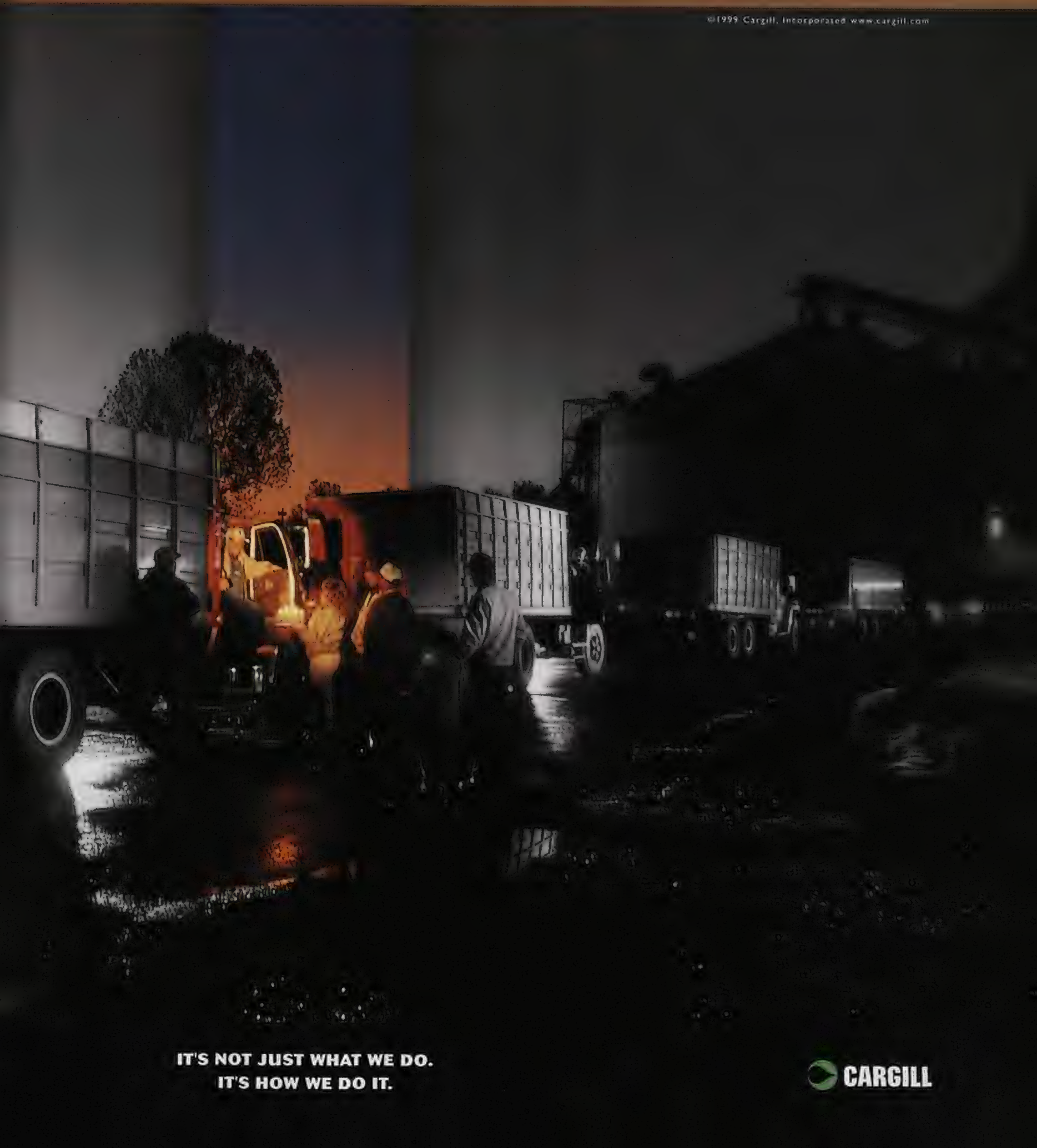

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In remote corners of the world, away from the later waves of European dogs that hybridized local varieties out of existence, some of the original dogs still survive. Unlike the Carolinas, their ancient lineage is undisputed. The most intriguing, and perhaps the most primitive, is the New Guinea singing dog. Low-slung and muscular, weighing about 25 pounds, with short legs, a long torso and a wide face, it is a curiously feline dog with an ability to climb and jump that is unmatched by any other breed—a handy trait in the sodden, jumbled forests of the New Guinea mountains, where it can scramble up trees like a cat. The name comes from its weird, harmonic howls, whose unearthly qualities prompted one of the highland tribes to claim the Creator had replaced the dog's tongue with the quill of a cassowary, a native bird. These dogs are truly wild animals and rarely seen.

Although singing dogs have been in New Guinea for at least 4,000 years, living examples were only discovered by the outside world in the 1950s. At that time, they were classified as a separate species of wild canid, although today they are officially grouped with the domestic dog. Unfortunately, purebred singers have all but vanished from New Guinea as European dogs have moved into the highlands. Today only about a hundred exist in captivity, the descendants of a handful of wild-caught animals, and most of those have been neutered or are too old to breed. Brisbin has a couple of pairs and has been working closely with Janice Koler-Matznick of Central Point, Oregon, an expert on singers who has founded the Primitive and Aboriginal Dog Society to promote the conservation of ancient canids.

Carolina dogs share physical characteristics with primitive dogs around the world, such as (from top) the Falklands Islands "wolf," the only mammal native to the islands and now extinct; the rare New Guinea singing dog; and the Australian dingo. All wild dogs are threatened by hunting, and interbreeding with domestic dogs.

As the singing dog adapted to the rigors of life in the wet forests of New Guinea, so did dogs elsewhere evolve to fit the local climate and conditions—both through natural selection and selective breeding by humans. There may have been hybridizing with wolves, coyotes and other wild canids, further stirring the genetic pot. Based on skeletal remains found at ancient village sites, it appears there were recognizably different types of domestic dogs thousands of years ago, from tiny toy-size breeds to animals with the heft of modern mastiffs.

While bones tell part of the story, they say little about a dog's outward appearance. Fortunately, in the case of early dogs in the Americas, pre-Columbian art, the accounts of early explorers and works of frontier artists fill in some of the blanks. The average Indian dog apparently looked like a dingo—with a fairly short coat, upcurved tail and upright ears. Judging from 19th-century paintings, the Iroquois raised dogs that would look at home in Brisbin's pack of Carolinas.

Along the Northwest coast around Vancouver Island and the Olympic Peninsula, the Makah and Coast Salish tribes kept two breeds, both now extinct—a typical, dingo-like village dog, and a smaller, longhaired variety with a tightly curled tail raised exclu-

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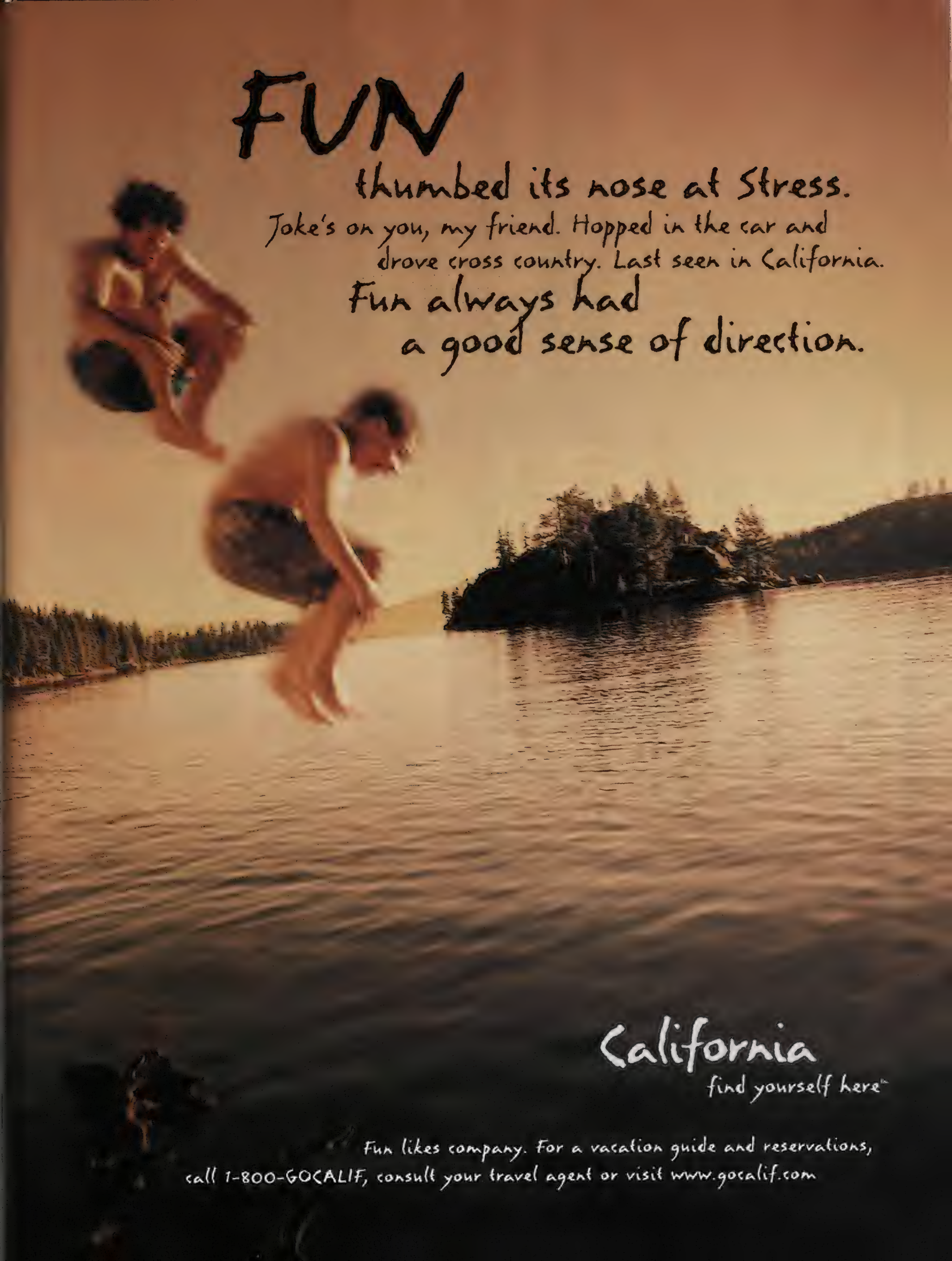
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A pack of young captive Carolina dogs hunts near a farm pond using the same techniques that their primitive ancestors did 8,000 years ago.

sively for its fur, which was woven into blankets. Dogs in the Arctic, subarctic and Great Plains, on the other hand, resembled wolves, with large frames, heavy coats and shaggy tails. Many explorers said they could scarcely tell the difference between a wolf and a Plains dog, which was well-known for its ability to drag heavy loads for humans.

"There's no doubt that the dog is closest to the wolf," says Juliet Clutton-Brock of the Natural History Museum of London, and one of the world's foremost authorities on the prehistory of domestic animals. Studies since the 1950s reveal many similarities between wolf and dog morphology and behavior, and experts have formed a consensus: the more than 400 breeds of domestic dog, from Chihuahuas to Saint Bernards, were descended from one of the small, southern Asian subspecies of the gray wolf—perhaps the Arabian wolf, or the Indian wolf immortalized by Rudyard Kipling.

The oldest fossils of what are undisputedly dogs date from about 11,000 or 12,000 years ago in Southwest Asia, making dogs the oldest of all domesticated animals. Archaeozoologists—scientists who study the remains of animals in association with humans—assumed that the domestication process would have started much earlier, perhaps 15,000 years ago, in conjunction with the rise of permanent villages and the advent of agriculture.

But in 1997, a team led by evolutionary biologists from the University of California at Los Angeles dropped a bombshell. After analyzing DNA from wolves and wild canids around the world, as well as from nearly 70 breeds of dogs, they concluded that dogs and wolves probably split off from each other originally more than 100,000 years ago—almost the same time that anatomically modern humans were first emerging, and long before anyone suspected domestication was possible. While hailed by some molecular biologists, the UCLA findings have been questioned by paleontologists and archaeozoologists. Last August, at a symposium on the history of the domestic dog at the University of Victoria in British Columbia, sponsored by the International Council for Archaeozoology, the controversy was a major topic.

One explanation that might reconcile the archaeological record and the DNA findings is that the dog's ancestors were wolves that split off from other wolf lineages 100,000 years ago, even though dogs themselves didn't evolve until more recently.

While debate swirls around the timing of dog domestication, some experts are taking aim at the fundamental notion that dogs and other animals were domesticated through a human-directed process.

"The standard explanation of how domestication began—that people brought in young wild animals, which they tamed and bred over many years to produce domestic stock—is a myth," argues archaeozoologist Susan Crockford, an expert on the Northwest wool dog, and the organizer of the Victoria symposium.

For quite a while, biologists have believed that domestication took place over a long time: a period that would cover taming an animal, molding it from a wild form into a physically and behaviorally different creature. That transition period should provide lots of intermediate forms in the archaeological record—only it doesn't. Instead, the bones of dogs suddenly pop up in archaeological sites about 12,000 years ago, at the same time humans were abandoning their hunter-gatherer culture.

Whether you're talking about dogs, sheep, cows, goats, pigs or water buffalo, there are consistent differences between the wild and domesticated forms. Compared with their wild cousins, most domestic mammals tend to be smaller, have shorter snouts, smaller brains and are more likely to be piebald or solid in color; they are more docile, reproduce at a younger age, have larger litters and have reproductive schedules, such as multiple breeding seasons in a single year, that differ from those of wild animals. Such changes also occur in domestic birds.

Interestingly, all these differences are a consequence of changes in

developmental rates, especially while the animal is young, which result in a sexually mature adult with the size and some of the characteristics of a juvenile of its ancestor—a condition known as paedomorphosis. And those developmental rates, in turn, all appear to be controlled directly or indirectly by a single biochemical: thyroxine, a hormone produced by the thyroid gland, which in turn regulates a suite of crucial growth and developmental genes. Thyroxine, Crockford believes, was the key to domestication changes.

Crockford theorizes that in a sense, wild canids domesticated themselves. By creating a new environment, one in which food supplies were available to those wolves able to tolerate the presence of people, humans set the stage for rapid evolution. Fear is controlled, in part, by the adrenal gland, and adrenaline production, in turn, is one of the many biological functions controlled by thyroxine.

In Crockford's view, the less fearful wolves would thrive near settlements, scavenging garbage middens and filching meat from drying racks, breeding among themselves and reinforcing those attributes. Natural selection would favor canids with thyroxine levels that produce lower adrenal response. Any pups born with a more fearful nature would simply drift away from the villages, back into the wilderness. After just a few generations, she believes, the wolves living near humans would exhibit reproductive, physical and behavioral differences, triggered by their new thyroxine patterns, that would set them apart from their wilder counterparts. They would have become primitive dogs. Only much later, long after primitive dogs had become genetically distinct and reproductively isolated from wolves, did humans begin exerting artificial selection to create distinct breeds.

Crockford cites intriguing evidence for her hypothesis. For 20 years starting in the 1950s, researchers in Siberia, trying to create a strain of silver fox that would be easier for fur-farm workers to manage, began selecting breeding pairs strictly on the basis of how calmly they behaved around people. Unintentionally, the Soviets were selecting foxes based at least in part on their thyroxine levels, Crockford contends. Within just 20 generations, foxes in the fearless strain had become markedly smaller, had undergone changes in their reproductive schedule, and had developed floppy ears, curled tails and piebald coats—precisely the traits that often separate dogs and wolves, and all of which are under the control of thyroxine.

"It may have taken only about 40 years, at two years per generation, for wolves to evolve into early dogs—perhaps more than that, but we can now look at that number as some sort of minimum. And 40 years is almost certainly too fast to pick up intermediate stages in the archaeological record," Crockford argues.

While some scientists look toward the dog's past, others are casting a worried eye toward the future of primitive breeds. Brisbin thinks the Carolina dog is relatively secure, although the expansion of coyotes into the Southeast may be causing a reduction in their numbers. But others, like the Tengger dog in Java and the Falkland Islands "wolf," are extinct, and more are threatened. Conservation organizations, already overburdened and overextended, rarely pay attention to domestic animals—even though many breeds represent important genetic diversity, and an irreplaceable slice of human and natural history.

All domestic dogs, from Chihuahuas to Saint Bernards, are descended from the gray wolf.

Which brings us back to the Carolina dogs. Are they, as some people claim, a direct link to the aboriginal past, or a recent construct of the canine melting pot?

Brisbin will keep working toward a major genetic study of the dogs. He also hopes to track wild Carolinas by fitting them with radio collars, to learn more about their habits, territory and prey.

But even if further research proves the Carolina is of modern origin, it still has much to tell us about natural selection and how, in a relatively short time, stray dogs were molded into an animal well suited to the wet, hot coastal plain of the Southeast. And that lesson alone, Brisbin and other researchers believe, makes this shy, lovely animal worthy of study and conservation.

Scott Weidensaul's new book, Living on the Wild Wind *(Farrar, Straus and Giroux), will be out in April, and Lynda Richardson is at work on two environmental books.*

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Wearing zoot suits and skirts that twirl, Lindy Hoppers are making lots of whoopee from coast to coast

This Joint is Jumping

BY DOUG STEWART

THE SANDRA CAMERON DANCE CENTER IN Manhattan used to offer just a few private lessons on weekends, but on a recent Saturday afternoon rehearsal rooms are packed. Inside, swing dancers, mostly in their 20s, are spinning, mooching and trucking with varying degrees of skill to the syncopated jump blues of Big Joe Turner and Louis Jordan. Many of the men are tattooed and goateed, and a few of the women have nose rings. In the advanced class, a stocky man in a tight black T-shirt emblazoned with the word "ASSAULT" practices his swing-outs alongside a petite woman in a stiff tulle party dress. In an adjoining room, frequent collisions are the telltale sign of a beginners class. When the lessons end at 5 P.M., the students emerge sweaty, out of breath, and buoyant.

Jason Fredric, 24, walks in from outside and steps up to the front desk. "I'm a newbie. I want to find out what swing classes you have going." He's in luck—altogether, there are 39 to choose from, up from half a dozen in the early 1980s. As he studies his choices, I ask him what brought him here. "The first time I tried swing dancing was last Monday at a friend's birthday party," he says. A swing band was playing, and a woman asked him to dance. "I said, 'I don't know how to do this, but if you show me the steps, I'll try.' I had the time of my life.

Rich and Nanette McNamara complete a "Kay's catch" on opening night of Swing Mania at Webster Hall, a Manhattan nightclub.

PHOTOGRAPHS BY GAIL MOONEY

From the moment I heard that music, I knew this was for me."

Swing dancing is enjoying a loud and rambunctious revival around the country. Nightclubs, ballrooms and dance studios from coast to coast have begun holding swing nights and are finding that customers line up around the block to get in. From the Ivy League to the Pac-10, campus clubs are drawing crowds of undergrads in saddle shoes. At dance studios, swing teachers who had 20 people per class a few years ago now face mobs of 80 would-be jitterbuggers.

At gyms and ballrooms, dancers too young to remember Tommy Dorsey, or even Talking Heads, are swinging and sweating to the big-band repertory of Count Basie and Benny Goodman. The music the dancers prefer is raucous and high-decibel. At smaller clubs, meanwhile, swing dancers are bopping to the stripped-down, speeded-up sound of electrified bands—swing with a backbeat. The bandleaders of the new "retro" bands, following the lead of Big Bad Voodoo Daddy and the Brian Setzer Orchestra, are more apt to play a cranked-up electric guitar than a clarinet.

Swing's resurgence can be traced to several sources: movies like *Swingers* and *Swing Kids*, a lack of enthusiasm for much of the rock-and-roll industry's latest offerings and, not least, an attention-getting TV commercial last year featuring swing dancers flinging one another through the air in loose-fitting duds from the Gap. In the Boston area, where I live, club owners report frequent mishaps when kids try to imitate the airborne dancers on TV. "The kids want to fly before they learn to crawl," moaned one local instructor recently. "It's a dance teacher's nightmare."

Even in the sticks, I've discovered, you don't have to travel far to find swing. After we attend a few lessons at our community center, my wife, Coco, is ready to hit the swing circuit. I'm more apprehensive. Males are expected to lead, and for a plodder like me, that's like choreographing a ballet while performing it.

"*Someone's* got to lead," an old hand tells me. "Swing dancing goes too fast to do by committee." Finally, we put on our dancing shoes and head to nearby Watertown, Massachusetts, for the Boston Swing Dance Network's monthly bash.

Arriving at 8 P.M., a full hour before the music starts, we realize something's up when we have trouble finding a parking spot within a quarter-mile of the ballroom-gymnasium. In the glare of the streetlights, we see people streaming toward the hall's double doors from all directions. We push our way inside, past a hand-written sign reading "NO AERIALS," and join the more than 300 people already chattering and stomping in ragged concentric circles.

In the center of the huge wooden

Shawn "Hi-Fi Honey" Sobel and Louis V. (above) sing with Bim Bam Baby at Webster Hall. Big Bad Voodoo Daddy (top) plays retro-swing at the 9:30 Club in Washington, D.C.

Everything old is new again at the Supper Club in Manhattan, where vocalist Kevin Ramsey (above) performs Cab Calloway numbers in the nightclub's '40s floorshow.

dance floor, organizer Roger Weiss, wearing a wireless microphone, is walking through the basic steps of six-count East Coast swing. (Free dance lessons are a mandatory preliminary at nouveau-swing events.) Between instructions he tells the audience, "This is probably the biggest crowd I've seen here, and I've been doing this for more than 11 years." Even before the lesson ends, the hall is at capacity, and the doors are closed. I notice lots of unhappy faces outside peering through the glass.

The dance kicks off to the rollicking beat of Doc Scanlon's Rhythm Boys, a five-piece outfit partial to '40s-style jump-blues. Coco and I giggle and twirl as best we can with four lessons under our belts. Whatever our flubs, we try to honor the cardinal rule of swing dancing: first, do no harm. The dancers here come in all shapes, sizes and abilities. The dance floor has the flavor of a wedding-dance-cum-Halloween-party. There's a man in a scarlet-and-black bowling shirt, another in a leopard smoking jacket. A young woman has accessorized her black minidress with high-top white basketball sneakers. Nearby is a dancer in a bright-red cocktail dress and a knee brace.

By 9:30, the joint is jumping. The jitterbuggers are starting to sweat through their outfits. The edge of the stage is lined with water bottles—it's a no-smoking, no-drinking venue. As we lean against the stage for a breather, the dance floor in every direction strikes me as impossibly lively, like those phony high-school-dance scenes in old movies. But this is real; no one choreographed it.

Small crowds form around some of the better dancers, the ones who seem to be doing everything twice as fast as everyone else. Two such are Benson Wong and Judith Sagan, who are exhibiting a lot of extremely cool moves. Their kicks and spins are per-

Air Steps

Lindy Hoppers usually keep their feet on the ground, but experts Roddy Caravella and Angie Whitworth, a daring dance team, take to the air.

The "front straddle" move starts with Angie jumping onto Roddy.

Roddy uses momentum to push her to the "ace in the hole" position.

Floor Steps

Lindy floor steps are smooth and performed in unison at a fast tempo. The dance team of Bill Kline and Midori Asakura show how it's done.

Bill and Midori end a sequence of high-step "traveling kicks."

The duo dance a "Suzi-Q," squatting as they travel sideways.

In a "toss out" Angie jumps as Roddy jumps in front to lift her.

A "Charleston lift" is enhanced by Roddy's own kick-through.

Roddy lifts Angie up and over, in an "around-the-back aerial."

Dancers often end an exhibition with the "piggyback walk."

Holding on to each other, they execute a side-by-side Charleston.

The dancers don't touch as they complete a "double-solo turn."

Bill and Midori improvise a face-to-face Charleston with a kickout.

In the Shorty George, knees and shoulders go in opposite directions.

Taking a cue from the late Gjon Mili, who shot a sequence of Lindy Hoppers for *Life* magazine back in 1943, Gail Mooney photographed a new generation of dancers showing off some flashy moves.

fectly synchronized; if they weren't, they'd be bruised if not bleeding. Yet they are not a dance team, I learn when I coax them to stop for a minute or two. They are part of a core of regulars here who switch partners from song to song. "I will dance with people from 20 to 70 if they're halfway decent at keeping a rhythm," says Wong, 37, a computer consultant by day. By night, he runs a popular swing-dance Web page. "It's a three-minute relationship. You're not asking someone to marry you. You're asking them to dance." Sagan, like Wong, has been swing dancing since 1991. "It's the best nonprescription antidepressant there is," she says. "It releases all those endorphins."

Between sets, I talk with bandleader Doc Scanlon, a.k.a. Don Dworkin. He's been playing swing music for 20 years, having migrated from bluegrass. "Swing has exploded in the last three years," he says. "All of a sudden, the crowds have gotten younger. Now, the people may not know the exact steps, but they're having a lot more fun flailing around."

In New York City, too, the swing scene is booming. Dance teachers and club owners say it's part of a reawakening of interest in social dancing of all kinds, from the hustle to the tango. "Four years ago, there was just one little club where the swing bands took turns playing," dancer Bill Kline shouts when I drop in on a tumultuous swing dance at the 92nd Street YMHA. Now, on any given night in Manhattan, swing dancers have a choice of places offering live bands and user-friendly wooden dance floors.

It doesn't have to be an expensive night out. At the weekly big-band swing dances at Irving Plaza, an ancient tin-ceilinged ballroom near Union Square, senior citizens get in for $5. On a recent Sunday night, the eclectic mix of ages and races here includes retired longshoremen and dreadlocked actresses, dance teachers and dance-challenged street peddlers. "This is what keeps me young at heart," says Rocco de Angelo, 77, in a crisp white necktie and Ronald Colman mustache. Says his dance partner, Marie McPartland, 65: "I think every neighborhood should have 50 ballrooms like this."

Of the New York nightspots offering swing nights, the swankest is the Supper Club, in the heart of the theater district. On the night I visit, the 14-piece house band plays swing, pop and show tunes as the prosperous-looking, well-coiffed clientele maneuvers about the dance floor. The evening's entertainment includes a floor show of very athletic dancers performing highly choreographed swing-dance routines.

Barbara Olvera styles swing dancer Sylvia Skylar's hair into a '40s roll at a Santa Monica, California, salon.

Toward midnight, I begin noticing younger faces, hats with brims, spectator shoes: the neo-swing set is infiltrating the place. These people are not ordering dinner; they're lurking around the edges, ordering water or maybe beer. (If anything dooms the revival of swing clubs, it will be their aerobically inclined patrons' preference for water over martinis.) A young woman in red, red lipstick and a wide-skirted '50s dress leans against a wall. Her short, copper-colored hair is arranged in eye-catching finger waves. "Go ahead, you can feel them," she says. The curls are as stiff as papier-mâché. "It's a gel." The woman, a modern dancer named Marisa Le Rette, 29, comes here after work to dance, with or without her boyfriend. The hair gel is some of the stuff punks use to stiffen their mohawks (which is fitting since many of today's swing devotees are punk fans; both movements share an interest in dressing up and dancing hard).

The latecomers, it turns out, are waiting for six young men in wide-brimmed hats and baggy suits, the Flipped Fedoras, who take the stage and start blasting up-tempo swing and rhythm-and-blues. Before long, the cool, après-dinner swingers I'd noticed earlier have been replaced by an ecstatic mob of jitterbuggers. Outside, I chat with Matt Carisi, 56, the singer with the earlier band. "Sometimes I look around here and it feels like 1939. This new generation has the

Heart's Desire in Springfield, Virginia, sells 1940s vintage swing regalia.

look, and it has the rhythm, too. I don't want to sound negative, but the Woodstock generation doesn't have any rhythm. It's do-your-own-thing." He flutters his hands in the air. "Swing dancing is not do-your-own-thing. You have to learn the steps, and you have to listen to the music."

The best swing dancers are literally thrilling to watch, and the fluid and acrobatic dance style they do is the Lindy Hop. Named after Charles Lindbergh's epic 1927 flight, the Lindy Hop was originally a set of moves improvised by African-Americans on sidewalks and in clubs in New York, most particularly at Harlem's legendary Savoy Ballroom. In its most extreme form, the Lindy was more a competitive performance art than a social dance. Savoy regular Frankie Manning, who's credited with throwing the first aerial (and who still teaches and choreographs at 84), took the airborne route as the surest way to win dance contests. "I just wanted to do something exciting," he says. "And I was crazy enough to try anything." Wrote Marshall and Jean Stearns in their 1968 history, *Jazz Dance*, "to the uninitiated it looked like mass suicide."

Indeed, swing music and swing dancing evolved together. Older forms of jazz, like Dixieland, bounced to a jerkier, tuba and banjo beat. In the late 1920s, big-band pioneer Fletcher Henderson created a new

At El Pachuco Zoot Suits in Fullerton, Califorina, Araceli Mojaro and John Herrera sport the perfect neo-swing "look," from wide-brimmed hats to double-loop watch chains.

Frankie Manning, center, an originator of the Lindy and credited with throwing the first aerial, still teaches the moves at the Sandra Cameron Dance Center in New York City.

style of arrangements and Louis Armstrong introduced looser, more propulsive rhythms, and jazz became more danceable. The sound of the '30s' hot new swing bands, those of Chick Webb, Jimmie Lunceford and Benny Goodman, with their riff-based rhythms and call-and-response choruses of horns and reeds, made the urge to shake a leg irresistible.

Through much of the decade, polite society dismissed both the music and the dancing as uncouth and suggestive. The *New York Times* quoted a psychologist who warned of the "dangerously hypnotic influence of swing, cunningly devised to a faster tempo than 72 bars to the minute—faster than the human pulse." The kids, of course, loved it. When Benny Goodman's orchestra played New York's Paramount Theater in 1937, it set off a near riot, with fans jitterbugging in the aisles. (It later developed that the first dancers to jump up were in the employ of the theater's savvy promoter.) The following year, Goodman brought his brand of hard-driving "killer-dillers" to Carnegie Hall and brought down the house. Swing had arrived.

By 1943, when *Life* magazine acclaimed the Lindy Hop in a cover story as "a true national folk dance," dance studios had begun offering a by-the-book version for easy popular consumption. Moves like pecking, trucking, the shag, the jig walk and the Suzi-Q caught on, and the once-pejorative term "jitterbug" came to encompass the whole style. But following the advent of rock-and-roll in the '50s, swing dancing eventually went the way of all partner dancing, stigmatized as a nostalgic and decidedly uncool pastime.

Today's most ardent swingers, like the original Swing Era hepcats, aren't interested in watered-down dancing-school steps. They want to show off. For a peek at the learning curve on the upswing, I pay a Sunday morning visit to Dance Manhattan, a studio on West 19th Street. A grueling, four-and-a-half-hour immersion course in the Lindy Hop starts at noon—"it's the Berlitz of swing dancing," a teacher tells me. You walk in with two left feet; you walk out ready to party (in theory). I talk with Gary Rosen, 26, who is sandwiched in a crowd of mostly young people working their way toward the registration desk. "It's all about the tricks," he says. "You're not going to impress anyone with the basic moves."

The workshop gets under way in a huge mirrored rehearsal space. Forming a double circle, upwards of a hundred people surround a chipper instructor in a baseball cap who asks, "How many of you have never had a swing-dance lesson?" About half the students raise their hands.

Two young women burst into the lobby at 12:20. Too late, they're told; the class is filled. "I'm so upset," says Rita McCabe as she and Sue Moroney stare crestfallen at the shuffling, kicking circles in the next room. The pair are cousins both in their 20s.

"All our aunts and uncles can do the Lindy," Moroney tells me. "At weddings, they do it to every song."

Moroney, the more assertive of the two, first tried swing dancing last summer in classic fashion: during

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Fleet Week. Looking for something to do after a black-tie gala aboard the USS *Intrepid*, she and five of her girlfriends were heading down 46th Street with a dozen sailors in tow. "I stopped at Swing 46 with three of the sailors just to use the restrooms, actually." They didn't come out, so the rest of the group went in. "When the sailors all came inside, you could see people in the club going 'Whoa!' It so totally fit the atmosphere." The group wound up staying the evening. Somehow, the sailors all proved to be adept swing dancers, Moroney says. "The guy I was dancing with, Sean, was such a good leader. I felt I was transported to a different time."

Vintage garb is a key element of the swing revival. This is particularly evident when I visit Washington, D.C., one of swing's East Coast epicenters. "I tell my students, 'If you're going to do this kind of dancing, you should look the part,'" says Debra Sternberg, 45, a Washington dance teacher. Sternberg wears '30s- and '40s-style clothing day and night. Her fellow teacher and dance partner, Tom Koerner, has been known to wear zoot suits to his law office. The two often swing at the National Park Service's Glen Echo Park in Maryland.

Dancing at the Derby, Hollywood's neo-swing hot spot, Jeff Beauregard wears Navy garb and partner Toni Czechorosky dons a vintage look to re-create the heyday of the Lindy.

Located in the faded remnants of an 1899 amusement park, next to a defunct bumper-car pavilion and across from a shooting arcade, the Depression-era Spanish Ballroom is tattered but still grand. On a recent Saturday night, the cavernous space quickly reaches its capacity of 600. I see gray-haired ponytails, middle-school kids with hats, and everything in between. By 9 o'clock all 600 people seem to be pivoting and twirling in a blur of suspenders and rayon crepe. Before the night is out, even the park ranger is swinging.

I chat with Scott Weiner as he sits out a number. Though a relative newcomer to swing dancing, Weiner, 28, is looking very clean in a $500 royal-blue zoot suit and $100 wing tips from Germany. His silver watch chain loops to his knees. "I figure if you're going to try a hobby, you might as well do it all the way," he explains. When he suits up, he finds himself automatically doing things like holding doors open for women. His friend Katti Ehoff, 20, also enjoys the retro etiquette of swing. "At ordinary nightclubs, if you dance with a man, he thinks you're going home with him," she says. "Here, you'll touch 35 men in one night but it doesn't mean anything. You've come to dance."

Shortly after 10 P.M., the 16-piece Tom Cunningham Orchestra launches into the Benny Goodman-Gene Krupa version of "Sing, Sing, Sing." It's jam time. As the crowd forms a huge circle, one after another of the more skillful couples jumps into the center for 30 seconds of manic, high-speed Lindy Hop. The women, I notice, take most of the risk. They're

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A marquee touts the opening night of Swing Mania on November 14, 1998, at Webster Hall. The event drew a capacity crowd of 1,200 to the building's 19th-century ballroom.

thrown through legs, snatched back the other way, flung upside down and spun around like lariats. The audience whoops and shouts each time a body goes flying. Finally, as saxophones and trumpets blare in a syncopated crescendo, Sternberg and Koerner end the jam with the Death Spike, their signature move. From a handstand on his shoulders, she dives straight down his back, then is whisked through his legs to land on her feet—right on the beat.

Later, bandleader Tom Cunningham tells me his band swings hardest when there are live Lindy Hoppers out front. "We feed off their energy, and they feed off ours." A good Lindy Hopper is spontaneous, he says, "the way a good musician is."

After the dance, Koerner, Sternberg and some of the other hard-core dancers retire to an all-night diner for eggs and coffee. Koerner, like Sternberg, is self-possessed enough not to worry about standing out in a crowd. He has to be if he can walk blithely into a suburban Virginia diner at 1 o'clock in the morning in a navy blue pinstriped zoot suit with outrageously padded shoulders, a knee-length jacket, and pants approaching his armpits. A 40-year-old reformed disco dancer, Koerner started swing dancing in college in the late '70s. He met Sternberg at a big-band dance in 1987. Leggy and petite, with a snappy, tart-tongued delivery worthy of Rosalind Russell, she was then working as the band's cigarette girl. "Unfortunately," she says, "swing dancers don't smoke, so I sold a lot of mints and gum." She and Koerner became swing-dance partners. They'd rent old movies and fast-forward to the dance sequences to glean new moves. Soon they were winning dance contests.

Like most American fads, the swing-dance revival started in California, where hip new bands like Royal Crown Revue and Indigo Swing began packing clubs in the early '90s. West Coast devotees are more apt to treat swing as a lifestyle than a diversion. Los Angeles in particular has a cottage industry providing Swing Era goods. "Four years ago, I didn't know what swing dancing was," says Ray Estrella, Jr., whose family owns El Pachuco, a clothing store in Fullerton that's made zoot suits for 21 years. "We've expanded the shop twice in two years."

A spawning ground of the L.A. swing-dance scene is the Pasadena Ballroom Dance Association, which has held swing dances and workshops (some taught by Frankie Manning himself) since the '80s. The scene's highest-profile venue, however, is a Hollywood nightspot called the Derby. Featured in the 1996 film *Swingers*, the club hosts retro swing bands nightly. On a recent Sunday, a hard-rocking band in vintage suits and greasy pompadours is cranking out hard-edged swing. The place is packed with 20- and 30-somethings, many of them singles. The music itself isn't new to me; I've heard it in small clubs around Boston for years. What's novel, here as elsewhere, is that the listeners aren't just standing around snapping their fingers. They're really jitterbugging. Or trying to—it's crowded in here.

One of the more flamboyant swingers on the dance floor is Morris Everett, a 29-year-old ex-punk with slicked-back hair, baggy pants and a vintage silk tie. He dances with a lot of body English, gesturing and mugging wildly. He's fun to watch, and he knows it. "I always dressed out of the past," Everett tells me when he finally sits out a song. "My friends said, 'You should be swing dancing.'" Casting agents have started slipping him their cards. "I never thought I could do this," he says, gulping air. "I thought I could sing. I thought I could act. But I get more work doing swing dancing than anything else."

Later I talk with Sylvia Skylar, who performs professionally with her partner Erik Robison (both 23) when they're not leading the Derby's free dance lesson. She agrees swing dancing is a fad, but she thinks it has staying power. "Swing is the first partner dance in a long time that's considered cool. You get to hold people close," she says. "It's good clean fun. You dress up, you laugh, you burn calories, you listen to great music. For people like me who grew up in the grunge, Generation-X, everything's-horrible era, it's exhilarating."

Doug Stewart, a regular contributor, is still learning to dance and talk at the same time. Photographer Gail Mooney, of the Woodstock generation, still hopes to hop the Lindy.

MUNDO MAYA

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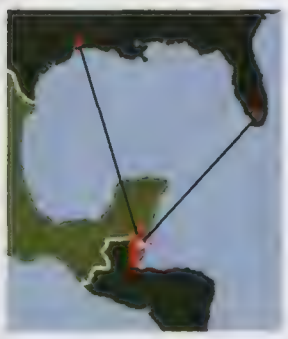

The keel-billed toucan, national bird of Belize. Photo by Jim Gallop.

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WHETHER THEY'RE BROWSING USED TITLES IN LARRY MCMURTRY'S TEXAS WAREHOUSE, OR ORDERING ON-LINE, BOOK BUYERS ARE A HOT COMMODITY

WHEN LARRY MCMURTRY WAS GROWING UP IN NORTH Texas, his hometown had plenty of stories but only a few books. In the 1950s, Archer City had the Royal Theater, which everyone called "the picture show." The town also had a grocery store, a few feed stores, a café and a Ford dealership. When he wanted to hear a story, McMurtry listened to his parents tell yarns about local cowboys, but when he wanted a book, he had to go to the drugstore. While ranchers' wives bought cosmetics and teens shared sodas, McMurtry browsed a rickety, revolving rack of paperbacks. James Jones' *From Here to Eternity*, Mickey Spillane's *Kiss Me, Deadly* and other period pieces took him far beyond the prairie's flat horizon. "I was awakened by the paperback revolution,"

BY BRUCE WATSON

PHOTOGRAPHS BY RICHARD ROBINSON

"I decided that if I ever came back here to live, I'd bring all the books I'd ever want."

McMurtry said. "I checked that paperback rack many times a week."

A half-century later, Archer City's drugstore is abandoned. The Royal Theater is gone. Boarded-up buildings and For Sale signs make the town look about as bleak as it did in the movie version of McMurtry's novel *The Last Picture Show*. As I pull into town at noon, the Windthorst National Bank thermometer reads 94 degrees Fahrenheit. A few pickups are parked along Main Street, but most pass by, their drivers only faking a stop at a flashing red light. Near the limestone courthouse, dust devils swirl through abandoned gas stations, their pump prices fixed at 36 cents a gallon. "Archer," as the natives call it, clings to life with little more than a café, a Laundromat, a hotel and a Dairy Queen. Yet the town has two thriving bookstores, each a trailblazer in its own frontier, more vast than any bookworm could imagine.

Down the street from the DQ, Archer City's prodigal son is turning his hometown into a book town. In the back room of Booked Up #1, McMurtry stands beside a stack of boxes, waist-high and 20 rows deep. He slits a sealed box with a knife, takes out an old book, thumbs through it, then pencils "$15" inside the cover. Setting the book in a stack, he digs out another. Around him, behind him, in the next room and the room beyond that are books. Books! BOOKS! Stacked to the top of 12-foot shelves, piled in corners, stretching like the infinite "Library of Babel" from Jorge Luis Borges' story, an estimated 250,000 used books are for sale in Archer City. "I decided that if I ever came back here to live, I'd bring all the books I'd ever want," McMurtry tells me. "I think I have."

McMurtry's bookstore fills four buildings. Archer City's other bookstore fills only a desktop. A block from Booked Up #1, in the town's new library, sits a computer wired to the World Wide Web. There, readers can browse "Earth's Biggest Bookstore," Amazon.com. To call this Website a bookstore is only slightly deceiving. It has no coffee bar or sofas. Yet without a single storefront, Amazon.com has sold more than a half billion dollars in books since opening in 1995. Its database lists nearly five million books for sale at a computer near you, whether you live in Morocco, Manhattan or Archer City.

One small town, two huge bookstores. At first glance, Booked Up and Amazon.com have little in common. One is on-line, the other on the lone prairie. One's stock has soared on

Novelist Larry McMurtry went back to his roots when he returned to his hometown, Archer City, Texas, to open a used bookstore on an otherwise desolate Main Street.

Wall Street. The other's sign is one of the few landmarks on a decaying Main Street. Yet two bookstores in a one-horse town prove that, for all the flurry of cable channels and mall theaters, books are standing tall in the Information Age. Book sales have slowed recently, and independent bookstores are struggling. But there's a footnote to these facts. For bookworms, the browsing has never been better. Other book dealers have followed Amazon.com onto the Web, and book towns are springing up around the world.

For all his narrative skill, Larry McMurtry is sometimes at a loss for words. Seated in the front room of Booked Up #1, I've asked him to explain why he feels so comfortable around books. "It's hard to convey this 'book thing' to nonbook people," he admits. "Even dedicated readers don't always understand. It seems to be a pure affinity, like some people have for horses. Or fine china." Ever since he left Archer City for college, McMurtry has been a book hound, first as reader, then as writer, finally as vendor. The novels that made him famous—*The Last Picture Show*, *Terms of Endearment* and his Pulitzer Prize masterpiece, *Lonesome Dove*—have been merely his morning job. He rises early and is finished with fiction by the time his readers go to work. Then he turns to his other vocation, as antiquarian book dealer. Since 1971, McMurtry has owned a series of used book stores. He opened his first in Washington, D.C., then added branches in Tucson, Dallas and Houston. In 1987, he opened a store in Archer City, filling the building he remembered from his youth as a Ford dealership. In a town that had been abandoned by shoppers for the bright lights of Wichita Falls, 20 minutes north, he began buying empty buildings. His dream is to create an enormous used book store recalling those that have vanished like cowboys.

McMurtry is anything but sentimental. For years, he mocked himself by wearing a sweatshirt reading "Minor Regional Novelist." Texas tall, with a shock of white hair and black-rimmed glasses, he paces past towering bookshelves like some minor regional monk, albeit in jeans and a work shirt. Don't get him started on readers who mistake his novels for Western nostalgia. He has fond memories of ranchers, including his father and grandfather, but most of his fiction details how the West was lost to suburban sprawl. Yet when he turns from his typewriter to sell, instead of write books, McMurtry waxes nostalgic. A generation ago, every major city had its warehouse-size used book store, he says. Acres of Books in Cincinnati, Lowdermilk's in Washington, Leary's in Philadelphia—McMurtry browsed in them all as a young "book scout," hunting for bargains to resell at a profit. But with urban rents soaring, the only affordable place to house acres of books is in a remote town that lies far from the madding malls. "Buildings here cost what it costs to park in L.A.," McMurtry says.

There is more than economy in McMurtry's method. At 62, he has already seen a part of himself die. He tells the story in short takes. Eight years ago he suffered a heart attack and had quadruple bypass surgery.

Inside a cavernous Amazon.com warehouse in Seattle, staffers working as "bundlers," "boxers" and "packers" process cartloads of books for readers around the world.

As it does for some 20 percent of heart patients, the invasive surgery left him in a severe depression. For more than a year he spent his days on a friend's couch, staring out the window. He spent nights in sleepless terror. "I died out of it," he said of the surgery and its aftermath. Though he wrote *Streets of Laredo* during the siege, writing was "like getting a fax from my former self." McMurtry eventually emerged from the darkness, but even now he speaks of a Faustian bargain. "You die on the operating table," he said. "Your heart literally stops. When you wake up, you get to live longer, but you're never yourself again." The new McMurtry is more retailer than writer. He has just finished what could be called *The Last Novel*, at least for now. Completing the "Last Picture Show" trilogy, *Duane's Depressed* was published in January. In lieu of additional novels, his legacy to readers will be one of America's biggest used book stores. Even if it happens to be two hours northwest of Dallas on the blistering Texas range, he reckons readers will drop by.

As he speaks, McMurtry is interrupted by a customer with a book to sell. It's a rare one—William S. Burroughs' debut novel, *Junkie* (published under the name William Lee). Paperback first edition, 1953. "I paid $300 for it five years ago," says the bearded reader from Wichita Falls. The bargaining begins. McMurtry asks how much the man wants for the book. He says "$1,500?" McMurtry says there's no way he can pay that. He waits for a lower price. None comes. Finally, he offers a flat $500 for all the books the Wichita Falls man has brought in. Sold. "Back when the big used book stores were around, a book scout could make a living buying and reselling a few valuable books no one else noticed," McMurtry tells me. "The thrill is like setting out on an Easter-egg hunt, looking for something rare and wonderful."

Book scouts continue to search for holy first editions, yet casual readers need scout no farther than their computers. After meeting McMurtry on his home turf, I discovered he had a book of essays about that turf. I called my local bookstores and asked for *In a Narrow Grave: Essays on Texas*. First published in 1968, the book has been overshadowed by McMurtry's fiction. None of the stores had it in stock; each said it could have the book within two weeks. Yet "Earth's Biggest Bookstore" gave me a different answer. Logging onto the Web, I typed http://www.amazon.com into my browser. Suddenly I was in the virtual bookstore.

A dark-green logo welcomed me. Scrolling down the page, I checked out featured books. I was invited to browse by subject, peruse recent award winners, best-sellers, and reviews of books from more than a dozen magazines and newspapers. I could relax and read a first chapter of a new novel. If I needed a CD, including some by country-and-western singer James McMurtry, the author's son, Amazon could ship it to me. But I wanted only the essays by McMurtry *père*. I typed the title in a search box. It came up instantly. I gave my credit card number (encrypted for security) and address, then beamed my order into cyberspace. The book landed in my mailbox *two days later*. Suddenly I saw why one customer called Amazon.com "dangerous." For those of us who value books more than our budgets, the chance to have any title in print within a few days is a little scary. Still, such convenience poses a question. If McMurtry's store seems "booked up" with a mere quarter-million tomes,

where does "Earth's Biggest Bookstore" keep five million books?

Across the street from a pawnshop in a low-rent section of downtown Seattle sits the headquarters of Amazon.com—and the man who started this dangerously efficient bookstore. Though Amazon's stock has made him a multimillionaire at 35, Jeff Bezos is not your typical CEO. Instead, he is that curious blend of boy, businessman and wizard so often found at the head of Internet start-up companies. His boisterous laugh defies his torrid pace in keeping his company ahead of the capricious curves in cyberspace. And the story of how Bezos took a bright idea and made it the Web's most ballyhooed business reads like a financial fairy tale.

Way back in 1994, when the Web was still in its crib, Bezos was just another computer whiz kid working on Wall Street. One spring day, he read that Internet use was rising 2,300 percent per year. "It was a wake-up call," he told me. "An increase like that means going from invisible yesterday to ubiquitous tomorrow." Bezos quickly drafted a list of 20 items that could be sold on-line, among them software, videos, music and books. Deciding on books, he took a leap of faith, digital style. He quit his job and hired a moving van. He was going west, though he wasn't sure where. "We told the movers, 'Head west and call us tomorrow,'" Bezos remembered. The next day, he chose Seattle, a city rich in computer talent and an afternoon's drive from one of the nation's largest book warehouses. Bezos and his wife, MacKenzie, followed their belongings and their dream. She drove, and he sat in the passenger seat, typing out a business plan on his laptop and recruiting a Seattle attorney on his cell phone.

The following July, after a frenzied year of shaping software to do book buying, Bezos stood in a Seattle garage filled with computers. Overhead, a blue, hand-painted sign read "Amazon.com." When Bezos pressed ‹ENTER› on his keyboard, the store instantly opened for business, 24 hours a day, around the world. Bezos had triggered a bell to ring with each order, and for the first few days, it rang about every half-hour. Then the popular search engine Yahoo! listed Amazon.com on its "What's Cool" site. Within a week, Bezos disconnected the bell. Orders were pouring in. The ringing was annoying.

When Bezos pressed ‹ENTER› on his keyboard, the store instantly opened for business.

As sales skyrocketed, Bezos moved his company to a small warehouse, then to its current location. There, in the subculture where "cool!" is the supreme compliment, Amazon.com nurtures the coolest corporate milieu. Near its reception desk, a bike rack is full of wheels. Employees in green shirts and shorts, pony tails and goatees, with various pierced body parts, scurry in and out of elevators. Those not just out of college are still youthful enough to have turned last year's office party into "Amazon.prom." All comers, including Bezos, came dressed in "retro" high school formal attire. In the offices, each desk is made of an old door hammered onto sawhorses. Bezos made the first desks himself, and his own nearly fills his painfully modest office where, above the Magic 8-Ball on his desk, hangs the sign from the garage start-up. Why the frugality? "We spend money on what's important for customers," Bezos says. "We buy the best computers, but customers don't care what our office furniture looks like."

Jeff Bezos has sold more than 25 million volumes since Amazon.com went on-line in 1995. Even so, admits the entrepreneur, "I buy half my books in physical bookstores."

TINA HAGER/FOCUS/MATRIX

At Amazon's no-frills distribution center, a dressed-down Seattle staffer monitors inventory. The only upscale accoutrement is state-of-the-art computer equipment.

It's not surprising that, since Amazon paved the way, the battle of the booksellers has gone on-line. Amazon claims to be "Earth's Biggest Bookstore." Barnes and Noble calls itself "The World's Largest Bookseller Online." And Borders.com boasts of "The Best Selection in the World." You do the math. Yet as on-line sales mount, some critics worry about selling books by the byte. For small bookstores, with actual shops on hundreds of Main Streets, are Amazon.com and the like the handwriting on the Web? What if, someday, bibliophiles like McMurtry gave a book sale and no one came?

On the day I arrived in Archer City, Booked Up had just gotten a new computer. McMurtry had no idea why his employees even wanted one. "I've never turned on a computer," avows the author. In lieu of a database, McMurtry keeps a complete catalogue in his head. When a customer asks about a book, he can usually lead the person to the proper shelf. Yet for this casual reader, the sheer size of Booked Up was dizzying. Lost in its labyrinth, I found it hard to believe that this wonderful drove of books, herded from stores around the country, is now shelved in Archer City, which McMurtry once belittled as "a bookless town in a bookless part of the state."

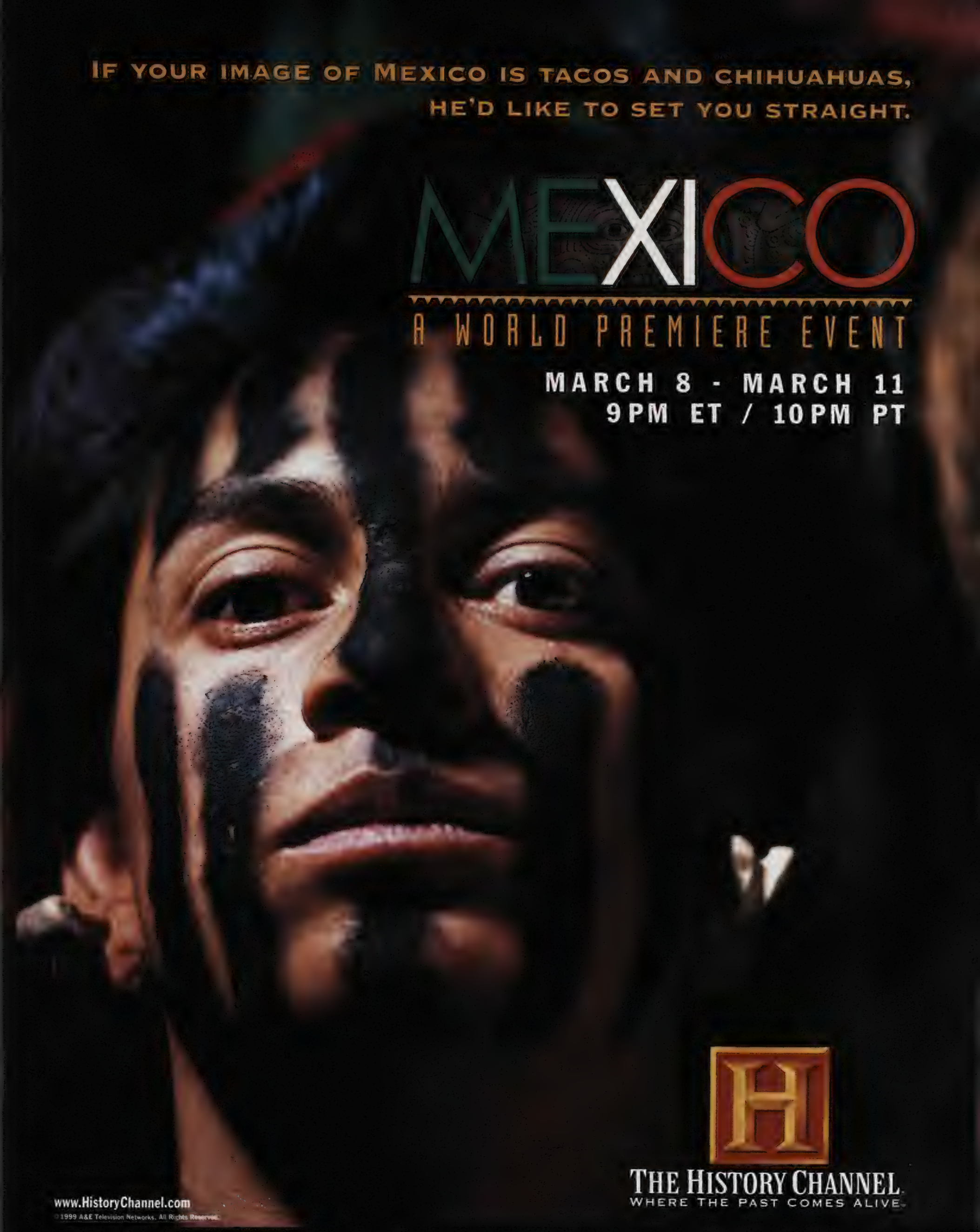
Booked Up #1 is the most settled of the store's four buildings. A cabinet in its front room contains precious "Easter eggs"—letters scrawled by Ezra Pound, first editions by William Faulkner, Jules Verne and now, William S. Burroughs. Back rooms are filled with nonfiction—including a superb Western history collection—as well as mysteries and Western and Native American fiction. Across the street stands Booked Up #2, a literature lover's delight, with fiction and poetry from "Abbey, Edward," to "Zukofksy, Louis" and a substantial selection of world history, art and rare books. A few doors up the street is Booked Up #3, stuffed with books dating to the 19th century, along with foreign books in translation. And across the square is the final building, which doubles as the home of the Picture Show Players. On a small stage behind shelves of books on art and music, the Players put on benefit concerts and plays to help rebuild the Royal Theater, whose towering marquee now sits on the bookshop's floor.

I found it hard to believe that this wonderful drove of books is now shelved in Archer City.

After the 1971 film *The Last Picture Show* was shot here, tourists came to Archer City to see the tumbleweed town. And more visitors came following the filming of McMurtry's sequel, *Texasville*, in the late '80s. But these days, Archer City is far-flung and forgotten. The International Book Town Movement may be its best hope for revival, McMurtry says. The movement began in Hay-on-Wye, a little Welsh border town that since 1961 has hosted about three-dozen used book shops, an annual literary festival and flocks of tourist buses. In the past decade, other hamlets declaring themselves Book Towns have sprung up in Belgium, France, Japan, Holland, Switzerland, Norway, Germany, Scotland and in Stillwater, Minnesota.

A quaint old lumber town bordering Wisconsin on the St. Croix River, Stillwater (pop. 16,000) is home to a half-million books. The town's three huge bookstores, one a consortium renting shelves to independent book dealers, keep browsers busy for days. Since 1994, when Hay-on-Wye entrepreneur Richard Booth officially declared Stillwater "First Booktown in North America," tourism has thrived. "We now have people coming here from all over North America," said Thomas Loome, owner or co-owner of all three bookstores, including Loome Theological Booksellers. A new hotel has opened, along with "antique shops, bed and breakfasts and restaurants beyond counting," Loome added. McMurtry, convinced that Booked Up will spark a similar renaissance, has lobbied locals to his cause. "At first, some people thought he was monopolizing town business," *Archer County News* editor and business manager Shelley Lewis told me. "But in the last year, he's brought a lot of people around."

As word has spread about Booked Up, McMurtry has seen an increase in customers. On weekends, a hundred people at a time roam through his store. Most come from within a five-hour radius, a Sunday drive for Tex-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ans. But others arrive from France, England, Australia and both American coasts. To keep customers coming back, McMurtry and his staff constantly cull books, removing stale titles and buying the stock of whole bookstores gone out of business. Estimates of his inventory range upward from 200,000. Someday he hopes to have a million titles. "If you have an exciting bookstore," he says, "the world will literally come to you."

If you run a virtual bookstore, however, you must go to the world, sometimes even the real world. In the fall of 1997, Amazon.com logged its millionth new customer. When a Tokyo bank employee named Hoshino clicked his order for two books, he didn't expect personal delivery. But with Amazon's customary flair, Jeff Bezos played wandering book peddler. First, Bezos had employees sign the package. Then, he packed an overnight bag and the customer's order—a computer guide and a biography of Princess Diana—and flew to Japan. The next day he handed the books to his lucky customer and took him to lunch. He flew back that afternoon.

Amazon's tendency to reinvest—particularly in marketing and technology—has kept it from posting a profit so far, but sales are expected to top $900 million this year. Let's see: at about 20 bucks a book, that would be 45 million books, shipped to more than 160 countries. "Cool," I said. "But where do you keep all the books?" My taxi was waiting.

On Seattle's industrial south side is Amazon's main distribution center. At first glance, the warehouse, as big as two football fields, appears to be like any other. But instead of auto parts in stock, this warehouse houses books. Books! BOOKS! Hundreds of steel bookshelves line the concrete floors. Cases of books are stacked against each wall. Here, and at other facilities in Nevada, Delaware, Germany and the United Kingdom, Amazon stockpiles more than a million titles for overnight shipping. For readers who need more, Amazon orders other titles directly from publishers.

"I'm not hostile to the notion of on-line bookselling," McMurtry observes. "I just don't see how it can replace the culture of bookstores."

Around the clock, workers on the loading dock are busy unpacking incoming books. Computers track each book, giving it a bar code and shelf space. "Pickers," using handheld scanners, move from shelf to shelf to fill orders, loading carts and then bringing them to shipping, where dozens of "bundlers," "boxers" and "packers" get the world's books ready for mailing. Standing in the shipping department, I had to look quickly to see what the world is reading these days. With a crunch of cardboard and the squeal of a tape gun, there went *The Seven Habits of Highly Effective People*. Farther down the table, before you could say John Irving, the author's latest novel was packaged and sent. At a nearby station, several "wrappers" worked in a perpetual Christmas rush, gift-wrapping orders in the bright patterns customers choose from the Website. Now I had seen a million books, all in one site. Never again would I feel well-read.

I enjoyed browsing Amazon's Website and ordering McMurtry's book on-line. The prompt delivery was amazing. Yet as I emerged from the bowels of Amazon.com, I could not help thinking of McMurtry, unpacking books one by one for customers who feel more at home on the range than on the Web. Can one book peddler's "pure affinity" for books compete with the database down the street? Stillwater bookseller Tom Loome is not optimistic. "Amazon and other on-line booksellers have created tremendous instability in the book trade," Loome told me. "Too many people won't walk down the street to their local bookstore."

Yet McMurtry isn't worried about competition from the other bookstore in Archer City. He trusts readers will share his joy in being surrounded by books. "I'm not hostile to the notion of on-line bookselling," McMurtry observes. "I just don't see how it can replace the culture of bookstores." Jeff Bezos agrees. "I buy half my books in physical bookstores," he told me. "I love feeling the paper of a book, hearing the binding creak, the smell of books, the whole tactile experience you can never get on-line."

One small town, two huge bookstores. On a Main Street in Texas, it would be tempting to say this town ain't big enough for the both of them. Yet the battle of the booksellers depends on browsers; not the computerized browser that scans the Web, but the human variety browsing through shelves—and databases. So long as readers cherish walking into actual bookstores as much as they cherish books, the battle will remain a standoff. Back at Amazon's distribution center, orders mount. Meanwhile, at Booked Up, the phone is ringing. "There's this man calling and calling," McMurtry says. "He's got to have the first volume of William L. Shirer's autobiography. It's not rare. We have volumes two and three, but not the first. When we find it, though, we'll get it to him. And we will find it." Opening another box with his knife, McMurtry begins to dig. "Maybe in this box."

Bruce Watson wrote most recently for Smithsonian *on the sport of curling. Richard Robinson is based in Orange, Virginia.*

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mining f
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Tramping over New Mexico wasteland, a collector scans for extraterrestrial offerings such as this rocky chunk, in fact a 3.5-pound metereorite.

or neteorites

BY KEVIN KRAJICK

PHOTOGRAPHS BY WILL VAN OVERBEEK

IT WAS THE MORNING OF JUNE 13, 1998, WHEN A 4.6-billion-year-old extraterrestrial object passed the moon's orbit, streaked into earth's atmosphere and blew to pieces in the sky somewhere in the neighborhood of Nelda Wallace's backyard. Wallace, a grandmotherly art teacher who lives outside the small farm town of Portales, New Mexico, was just sitting in her living room. She and her brother-in-law were about to sip morning coffee. They heard two huge aerial explosions, jumped to their feet and dashed out to the porch. A dark basketball-size object dropped at a steep angle from the southwest with a loud *ssshhht* and landed 150 feet away in a dried-up garden. The sky hadn't yielded so much as a drop of rain since January; now this. The impact sounded like two cars colliding and raised a cloud of dust as big as a house. Wallace grabbed her shoes, and she and her brother-in-law ran over to look. They were about to become among the few humans to recover a freshly fallen meteorite.

Fragments pelted other properties, too—only the first of many strange things soon to occur in town. For a meteorite belongs to whoever owns the spot where it lands. And folks quickly learned that the objects are more than just stars of big-budget movies regarding the end of the world (a plausible concept, it turns out). Scientists covet them, while competing private dealers scoop them up for resale at spiraling prices. The most valuable type, a dislodged piece of the moon, sells for $25,000 a gram—2,500 times the price of gold. Professional searchers travel the world over to hunt them down or otherwise acquire them. Some will use any means possible, from satellites to simple theft. Portales was about to be invaded by meteorite dealers, meteorite fans, meteorite poachers, university and government meteoriticists, and other alien life-forms.

Before we tell the rest of this story, let's get our terms straight. A meteoroid is an extraterrestrial object that hits earth's atmosphere. A meteor is not an object at all, but the phenomenon that ensues: the classic "shooting star" light streak produced when air friction and pressure cause the meteoroid to melt, vaporize or explode—the fate of almost all such falling objects. The rare fragment that survives and actually lands on earth—that is a meteorite.

Don't feel undereducated if you didn't know that; for ages,

AS PRICES SKYROCKET, GONZO COLLECTORS ARE COMBING THE GLOBE FOR THESE CELESTIAL FRAGMENTS—AND RILING RESEARCHERS

Dealer Robert Haag hoists a slice of the Esquel pallasite, a meteorite recovered from Patagonia. This piece is valued at $250,000.

humans misunderstood or ignored meteorites. In the 19th century, some scientists dismissed them as wild superstition or explained them as terrestrial rocks hurled by rogue winds or conglomerates formed by thunderstorms. After one split up and fell over Weston, Connecticut, in 1807, a myth grew up that Thomas Jefferson had commented: "I would more easily believe that two Yankee professors would lie than that stones would fall from heaven."

Since then, modern astronomy and scores of well-documented falls have shown that earth's atmosphere is bombarded with perhaps 50,000 tons of interplanetary debris each year. Probably most comes out of the asteroid belt, a collection of sub-planet-size junk floating between Mars and Jupiter. Some may be pieces of comets. By the 1980s, scientists had accepted the once far-out idea that a few rare ones are pieces of Mars and the moon, blasted into space by asteroid or comet impacts. When those chunks intersect our orbit, they plummet to earth. Fortunately for us, most celestial debris consists of dust-size particles, not proper rocks. Even spectacular shooting stars are usually pea-size; most are consumed far above earth's surface. Long-term photographic records of meteors suggest perhaps 6,800 meteorites, each weighing at least a pound, touch down annually. No one knows for sure how many, because almost none are found. There are good reasons. Three-quarters of the planet is ocean; most of the rest is uninhabited. Most meteorites are far smaller than the ones that fell on Portales, and set down without fireworks—just a golf-ball thud on the ground. There, they can easily be obscured by plants, dirt or similar-looking rocks.

Explosions of the big ones are seen for hundreds of miles, but optical illusions often send searchers to the wrong spots. Until recently, fragments of only 2,600 meteorites had ever been identified, most of them chance finds of corroded old pieces. Even now, pieces of only five or six witnessed falls are retrieved worldwide each year. On the bright side, no human-meteorite fatality is known, though a 1911 fall did kill a dog in Egypt.

Meteorite entrepreneurs first showed up in Homestead, Iowa, in 1875; they paid farmers $2 a pound for pieces of a fresh fall there, probably for resale to museums or curiosity collectors. But meteoritics remained an esoteric, underfunded science for another century, until researchers realized the rocks held basic clues to the evolution of the solar

PHOTO LIBRARY/PHOTO RESEARCHERS

system and of life. Many are far older than earth rocks, and may preserve unusual mineral compositions predating the planets. It was not until 1990 that researchers located a hidden crater, straddling the Yucatán coast and the Gulf of Mexico seafloor, thought to be crucial evidence that a gigantic meteorite wiped out the dinosaurs and much other life here 65 million years ago (SMITHSONIAN, April 1998). The main successors: mammals like ourselves. The splashiest headline came in 1996, when American geologists announced they'd found fossilized traces of life in a long-obscure Martian specimen called ALH 84001.

All this makes meteorites sexier and sexier. ALH 84001 sent the simmering market over the edge (never mind that dozens of scientists have since ganged up to declare the specimen does not show signs of Martian life). There are 13 known Mars meteorites, with parts of about half of them in private hands. In the past two years, the price of a Martian meteorite has gone from $100 a gram to $2,500 or more, so some owners have pulverized specimens for resale. Recently Darryl Pitt, a prominent New York meteorite dealer, had the QVC Home Shopping Network market his $98 Mars Collector's Cubes—Lucite cubes containing a fiftieth of a gram of a Martian meteorite dubbed the Zagami, including a certificate of authenticity. Even weathered old asteroid chunks retail for at least $1 a gram. Fresh falls bring more, for they are in better shape and have more scientific value. Don't forget accessories: after a 26-pound meteorite smashed the backside of Michelle Knapp's 1980 Chevy Malibu in 1992, the Peekskill, New York, teenager sold the wreck for $10,000. The car was worth $300 when it was running.

Many meteorites, far older than earth rocks, may preserve mineral compositions predating the planets.

Who buys this stuff? Worldwide there are maybe 10,000 serious private collectors, including Jim Schwade, an Illinois radiologist who has acquired 760 specimens since 1982. "When I found out you could actually own something from outer space, well, that just got to me," he says. He pursues his hobby with so much ardor—and cash—that he moves in the same orbit as the American Museum of Natural History (AMNH) and the Smithsonian, who want the latest meteorites just as badly as he does, and trade specimens with him like baseball cards. "We have a great collection, but not much money to buy new things. So I barter," admits Martin Prinz, curator of the AMNH meteorites. Hollywood and Silicon Valley zillionaires are now trending toward flashy-looking mantelpiece meteorites with the ultimate sales hook. "They're natural, they're sculptural, they're decorative—and they could unlock the secrets of the universe!" burbles David Herskowitz, director of the natural history department for auctioneer Butterfield & Butterfield. At a 1998 New York sale by Phillips auctioneers, a world-renowned astrophysicist was outbid for one coveted specimen by a megabucks movie director.

And so a new, highly specialized creature has sprung up: the professional meteorite dealer. Ten years ago there were a half-dozen in the world. Now there are easily ten times that number, plus countless part-timers. The biggest contingent is around Tucson, Arizona. Maybe it's the sandy desert all around, which has yielded many old meteorites; any terrain with little plant life or terrestrial rock to confuse searchers is prime hunting ground. Several major

Globe-trotting Marvin Killgore—displaying a 1,472-pound specimen—prospected for gold before turning to meteorite hunting.

observatories are clustered here. The city, home to the annual Gem and Mineral Show—the world's largest—has a tradition of attracting rock hounds. There is also a heritage of small-time mineral prospecting here, so people are used to looking for things on the ground. Maybe it helps also to be near Meteor Crater, a huge ancient impact mark now run as a tourist attraction, and Roswell, New Mexico, the lively cult site of an alleged 1947 UFO landing.

In any case, the world's kingpin dealer is a startling, likable Tucsonite named Robert Haag. With his curly tresses and unstoppable friendliness, Haag is a cross between Prince Valiant and a TV evangelist. The son of mineral dealers, he started in the early '80s hawking gimmicky "space passports" in shopping malls, then progressed to actual space rocks. A few weeks after the Portales fall, I met him and Mike Farmer, a college student who's also taken up dealing, at a bar. They plunked down dueling meteorite chunks to wow the waitress and slugged back pitcher-size beers. "I just love the rocks! It means I can play astronaut. Never in the history of the planet have there been more available, because free enterprise has made them so cool!" chortled Haag. He will go anywhere, anytime to find a meteorite. Siberia? When's the next plane? Burkina Faso? No problem. He bangs on farmhouse doors in Kansas, treks in the Sahara, hang-glides in Chile. In 1991 the sharp-eyed Haag spotted the first piece of moon rock ever to come into private hands, among bucketfuls of meteorites he had purchased from Australian collectors.

His secret weapon: the best place to find meteorites is where others have already found them—the so-called strewn field, over which an object has shattered. He does not necessarily hunt himself; instead he convinces everyone else to do it for him. In developing countries, all it takes is a side-by-side display of U.S. dollars and a sample meteorite so people will know what to look for. A few years ago Haag showed up in Gibeon, Namibia, site of a well-known fall that everyone considered thoroughly mined. The high school principal lined up all 400 students for a look at Haag's samples, and shortly after, Haag left town with more than 500 pounds of previously overlooked fragments. Some hunters enlist farmers, friends or colleagues, notes astronomer O. Richard Norton, author of the book *Rocks From Space*. "Haag uses whole towns and villages."

North of Tucson in the small town of Payson, I met the equally remarkable Marvin Killgore. Craggy, calloused, cowboy-hatted and sunburned, Killgore looks every bit the small-time gold prospector he has been since childhood. Or was, until 1990, when a buyer told him he could make more per ounce on a good meteorite. Killgore had no idea what one even looked like, but he had an experienced eye, an appetite for reading and a metal detector for finding

Proud proprietor of a 37-pounder, Nelda Wallace flanks the ten-inch-deep mini-crater where her backyard meteorite landed.

buried nuggets. Many meteorites are heavy with iron and nickel, so Killgore went at it full tilt and quickly became one of the world's leading hunters. He now has a passport as worn as Haag's and a terrific collection. He sells 25 percent of his finds and keeps the rest.

Killgore digs into any source that might hint at a fall, new or old, however obliquely: anthropology texts, mining reports, the Internet, conversations overheard in restaurants. "U.S. Geological Survey publications have been very good to us," he says. He and his son, Elijah, also passionate amateur astronomers, recently built themselves a telescope the size of a howitzer so they can scan the night skies.

One summer day Marvin, Elijah and I bumped over a dirt road in northern Arizona to a pasture called Clover Springs. Marvin had targeted this locale from a 1940s handwritten report in the state university archives. It indicated that somewhere was a boulder on which a cowboy had found a fragment of a rare meteorite type called a mesosiderite. Nothing more had ever been spotted. We spent the day humping up and down hills and straggling through thorny brush. Marvin swung the detector pod like a blind man's cane, listening to signals through headphones. Every once in a while he'd dig with a miniature garden rake and adroitly sift dirt through his fingers. Pop-tops, tobacco cans, a horseshoe, a heavy chain and a hell of a lot of bullets—but no meteorites. This did not spoil his constantly sunny manner. "I never get tired of this. I can do this 12, 14 hours a day. I just like being outside," he drawled. "The only thing that ticks me off is those people in Libya."

The kindly Killgore was not referring to the Libyans—they'd never done him any harm—but to the fact that for the past two years, a cloak-and-dagger consortium of private European hunters has been scouring the Libyan Sahara for meteorites, with spectacular success. The biggest find to emerge so far from there is a greenish 513-gram lunar fragment, picked up in March 1997 and now filtering onto the international market in pieces. The hunters deal

Inside the hole was a fist-size stone with a black crust.

Peanut farmer Gale Newberry clutches the meteorite that smashed this hole in his barn roof.

secretly with museums, shield their identities and keep their sites secret, lest anyone track them. No Americans compete with them, since the U.S. government strongly advises against visits to Libya. "I'm missing out on all that action," moaned Marvin.

There are other international intrigues. Counterfeit meteorites are surfacing, reputedly from Mexico. Forgers are said to dig a hole in the ground, pour in molten metal and let it cool slowly so it doesn't develop pits. Then they let the bogus specimen rust a little. The fakes lack the proper nickel content and crystal structure. In 1997, Ronald E. Farrell, a Bethany, Connecticut, dealer, was arrested in Brazil after he allegedly visited the National Museum in Rio de Janeiro to trade, then switched some of its specimens for worthless rocks. Police say that they found three small meteorites in one of Farrell's shoes at the airport. He pleaded no contest and was kicked out of the country after ten weeks in jail; the president himself signed the expulsion order. Farrell claims he was framed, perhaps by cutthroat competitors.

None of this compares, however, with what transpired in Portales. When Nelda Wallace reached the spot where the object hit, she came upon a rock crisped asphalt-black on the outside—this was a fusion crust, formed on the fiery passage through the air—and veined with silvery metal. Her brother-in-law touched it, but it burned his hand. Ten minutes later they were able to haul it out of its modest crater and put it on the bathroom scale: 37 pounds. Three miles away, Gale Newberry, a peanut farmer, noticed a hole in his barn roof. He looked down and saw an identical-size hole in the wall. Inside that hole was a fist-size stone with a black crust.

By some wild cast of fate, a half-mile from Newberry is the house of Skip Wilson. Wilson owns the local Video Vault—and is held by some to be the world's greatest living meteorite hunter. Collectors describe him as "legendary" and "like a god." Since the 1970s he has personally found fragments of close to 200 different ancient

In Arizona's saguaro-studded wilderness, outside Tucson, hunter Mike Farmer conducts a search for specimens. Barren desert territory often yields numerous finds.

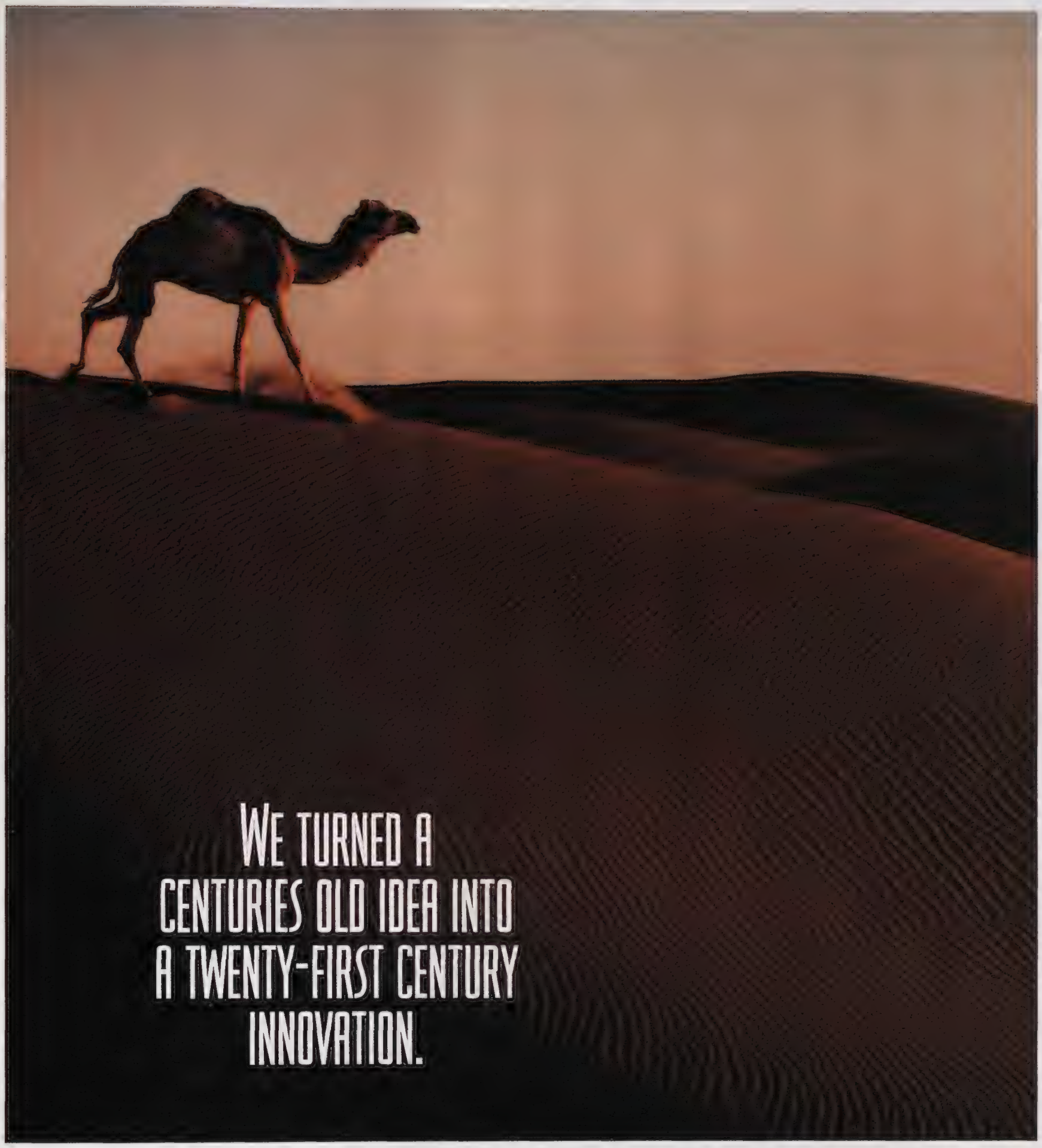
falls—without hardly crossing the county line. He just walks abandoned farm fields where Dust Bowl winds have blown away the soil to expose rocks, and keeps the sun at his back. He doesn't sell his finds but passes many around to scientists, and as a result probably has coauthored more papers on meteorites than most PhDs in planetary science. Even he had never seen a fresh fall until Newberry phoned him. At a glance, Wilson identified the stone as a genuine meteorite. "Gale, you better be careful," he said. "These things are worth money. A whole lot of people are going to try and get it off you for nothing."

This was Saturday. Monday evening the news got out of town and onto CNN. Within a few hours, Haag and Farmer were separately pulling out of Tucson for what is normally a ten-hour drive to Portales.

Farmer got there first, around 7 A.M., thanks to a $200 speeding ticket in Tularosa, New Mexico, and headed straight for Newberry's. He offered $1,000, then $1,500 for the 525-gram specimen. Newberry politely turned him down. Haag had stopped for a few beers with UFO fans in Roswell during the night and so did not arrive until 8:30 A.M. He rolled up to Newberry's barn in a sand-colored Humvee and jumped out wearing shorts and dark shades. "You the guy who found the meteorite?" asked Haag. "Yessir," said Newberry. "All right! Gimme five!" Haag nearly wrestled the startled Newberry to the ground with an affectionate bear hug and offered $5,000 in cash, plus $1,000 in gold. Newberry said no. Farmer, hoping to generate more product, suggested that Newberry's 20-year-old son, Jerrod, look for more pieces. Jerrod took off on his bike and, to the astonishment of the dealers, came back in 15 minutes with an even bigger chunk from a roadside ditch. He snapped up Haag's $5,000.

Soon as word of this got out, it became like a children's Easter-egg hunt, gay at first, but threatening to turn ugly because of all the bullies knocking down little kids. A couple of electric linemen, a farmworker and others eagerly sold pieces they'd found to Haag, Farmer or one of about ten other dealers who showed up. Marvin and Elijah Killgore bought one that had dented a road in front of someone's house. Then they asked the road supervisor if they could take the crater, too. Sure, he said, help yourself. Just patch the asphalt. They rented a special saw and encased the road section in plaster and concrete. Some landowners let the dealers search their land in return for splitting finds. But with temperatures hitting 115 degrees Fahrenheit, this soon became a combat situation. In the heat, Michael Cottingham, a collector from Silver City, New Mexico, saw a cow go to its knees, roll out its tongue and fall over dead. Mike Farmer froze, then screamed, when a four-foot rattlesnake began moving three feet away. Killgore pinned the snake's head with his metal detector.

The first few finds went for about $2 a gram, but sellers quickly sensed blood and jacked the price up to $15—a wholesale record. One farmer made Allen Shaw, a dealer from Kansas City, stand at his pickup-truck window in a convenience-store parking lot to bid on two chunks while he haggled with Haag on a cell phone. Shaw prevailed by shoving hundred-dollar bills under the man's nose. Inside Love's Gas Station, Mike Farmer handed $5,500 to two young men while a woman looked on angrily, apparently believing she was witnessing a drug deal. Haag came to



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Nelda Wallace's porch, but she considered his manner discourteous and aggressive, and shut the door in his face.

At least he was offering to *buy* her meteorite. The next day Wallace looked out her window and saw eight young men bumping around her field on all-terrain vehicles, their eyes fixed on the ground. She knew what they were looking for, and she hadn't even had a chance yet to look herself. Wallace owns a BB gun, a .22 and a 30/30, and she went out and told these people to leave and never come back. One farmer down the road finally called the sheriff because the hunters he chased just kept returning, like crows. Skip Wilson got permission to hunt a neighbor's field, but in the graying dawn he started making out competing figures—10 . . . 20 . . . 30 crawling, walking slowly, turning in circles. Like *Night of the Living Dead*, pointed out Cottingham. People on horseback trampled crops. Out-of-town cars patrolled roads with drivers peering through binoculars. Many who sold rocks went vague when asked where they found them, or gave false locations, far from the 6-by-1.5-mile elliptical strewn field Wilson had plotted. "You wouldn't believe the greed," he said. "You can bet some local kids stuck someone else's meteorites in their pockets and ran off to get rich."

At last count, 44 chunks totaling about 150 pounds had been recovered in Portales.

More precious than gold, this metal-laced meteorite fragment, from Portales, New Mexico, would command at least $25 per gram.

Wilson eventually found two pieces himself, including one of the biggest, at 11.25 pounds. He was able to keep it since the landowner had given him permission to take what he found. At last count, 44 chunks totaling about 150 pounds had been recovered, and people were still looking.

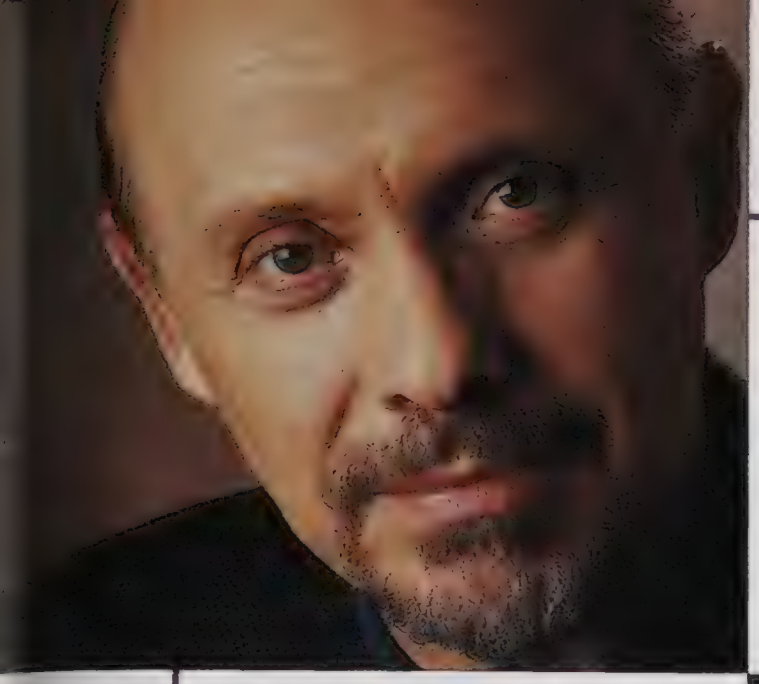
In the rush, one group of searchers was conspicuously missing: scientists. This, even though Portales is close to three universities with major meteorite collections, and other related institutions. It was typical: most were too busy teaching, writing grant proposals or examining meteorite slices under a microscope to actually go out and find one themselves. "Nine out of ten meteoriticists wouldn't recognize a meteorite on the ground," says David Kring, a senior researcher at the University of Arizona's Lunar and Planetary Laboratory. He admits it's embarrassing, but explains, "There are a lot of people who can find a meteorite, but very few with the training to study them. It's more efficient to let other people look."

The scientists, however, are first to complain when dealers and collectors want high prices for specimens, or split them into pieces. "Science is being threatened when a meteorite gets chopped up, because you can't see what surrounded it," says Harry McSween, a professor of geology at the University of Tennessee. "They have an interesting history and great scientific value—but $1,000 a gram? Come on, they're just rocks. We're getting priced out of the market," complains Roy Clarke, curator emeritus of the Smithsonian's meteorite collection.

"Jealousy—that's all it is," snaps Haag. "I drove out here ten hours for this meteorite and they didn't even twitch. Unless there's money involved, people won't waste their time, and the meteorites will sink into the ground and be lost forever." Privately, many scientists admit he is right; they need the Haags of the world.

Not that all scientists stay indoors. In August a small, highly trained team sponsored by the Danish Ministry of Research braved crevasses, melt streams and moulins to search for a meteorite thought to have just landed on a remote mountain glacier in Greenland. They found nothing; the main victory was that everyone came back alive.

Until now scientists also have had exclusive run of the true meteorite happy-hunting ground: Antarctica. It is not that more meteorites land there; they are just better preserved and easier to find. The continent is coated with ice, so meteorites that may rust to nothing in a few centuries elsewhere last for eons there. And since the surface is ice, the only rocks to be seen probably fell from the sky. The only earthly geology breaking the surface are the tops of nunataks, mountains surrounded by glacial ice. These actually help concentrate meteorites: ice sheets lumbering seaward bump against them; the meteorites embedded in the ice get stuck. High winds then excavate the ice surface, leaving distilled piles of stones sitting in depressions.



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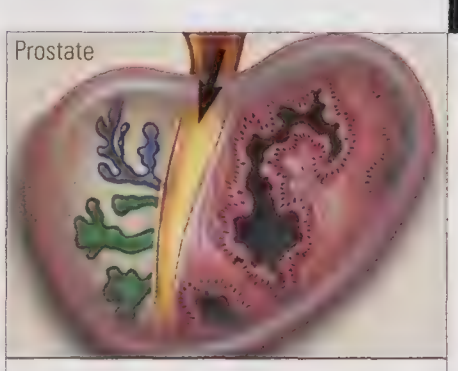

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Skip Wilson holds meteorites he gleaned from the Portales fall. The legendary collector shares his bounty with scientists.

Japanese glaciologists discovered this by accident in 1969. Since then Japan and the U.S. National Science Foundation regularly send collecting teams. They have found 20,000 fragments from up to 10,000 falls—far more finds than in all previous history. It could soon be a scientist's paradise lost: last year the first private collectors showed up, having paid $25,000 each for an eight-day trip.

Even the fabulously funded NSF has only one main instrument for finding meteorites: the human eye. "Still the most powerful tool we have," says Ralph Harvey, head of the NSF collecting team. Now, NASA is developing a robot that can be equipped with cameras, infrared sensors, a metal detector, a magnetometer and a spectrometer for finding samples buried under ice or in the dark. The robot might be used in Antarctica, where it would plant little flags next to finds for humans to pick up later.

Simpler technology may solve the problem of finding the oldest meteorites. Even most Antarctic specimens landed no more than a few million years ago; older falls have disappeared under ice or rock, washed into the sea or disintegrated, leaving falls from most of the earth's history unprospected, except for a handful of "fossil" meteorites accidentally found in mines and quarries. So Andrew Sicree, a researcher at Pennsylvania State University, got an idea. Coal mines routinely run powerful electromagnets over the coal to cull "tramp iron"—lunch boxes, wrenches and other junk that falls in and could wreck processing equipment. It might be possible, he believes, that some culls are iron-rich meteorites that fell when the coal was plant matter growing on the surface. He has made a deal with 13 mines to save what they pull out, and is sorting through his first batch of 100,000 pieces.

Searches for the newest meteorites are becoming more imaginative, too. When thousands of people saw a fireball explode in the sky somewhere around El Paso, Texas, on October 9, 1997, U.S. and Canadian scientists assembled to calculate its trajectory, speed and mass so they could target possible fragments. Alan Hildebrand, a prominent planetary scientist with the Geological Survey of Canada, went door-to-door with colleagues to interview witnesses and examine photographs and videos of the phenomenon. They triangulated seismographs that had recorded the blast. Then they called in the heavy artillery: a U.S. military network of low-frequency microphones and light-sensing satellites designed for detecting nuclear explosions and missile launches. Recently declassified documents reveal that the devices also record big meteors; scientists from Los Alamos National Laboratory in New Mexico got the data released. After collating this information, scientists searched on foot for weeks in the designated area and found . . . nothing.

With meteorites, what you see is what you happen to get.

That is the problem with meteorites. What you see is what you happen to get. A few weeks after the Portales fall, I went into the desert with David Kring, the University of Arizona meteoriticist. He was looking for another missing meteorite, the possible remains of a fireball seen a few days before the Portales event. Kring had concentric circles drawn on a map southwest of Casa Grande, Arizona, where he figured it went down. We walked grids for hours, peering at the bare soil and shoving candidate rocks with our feet to chase away scorpions. The rocks we picked up did burn our hands, but of course this was because of the heat of the day, 105 degrees F. Toward the end, we had covered some fraction of 1 percent of Kring's map. I then spied an unusually black, shiny stone with an irregular, meteorite-like shape. I eagerly bent down. It was extremely light, not heavy like a meteorite, and it began to crumble in my hand. It was the dropping of an animal who had apparently eaten a great many ants for breakfast.

Kevin Krajick is writing a book about diamonds—which sometimes arrive inside meteorites. Will van Overbeek is based in Texas.

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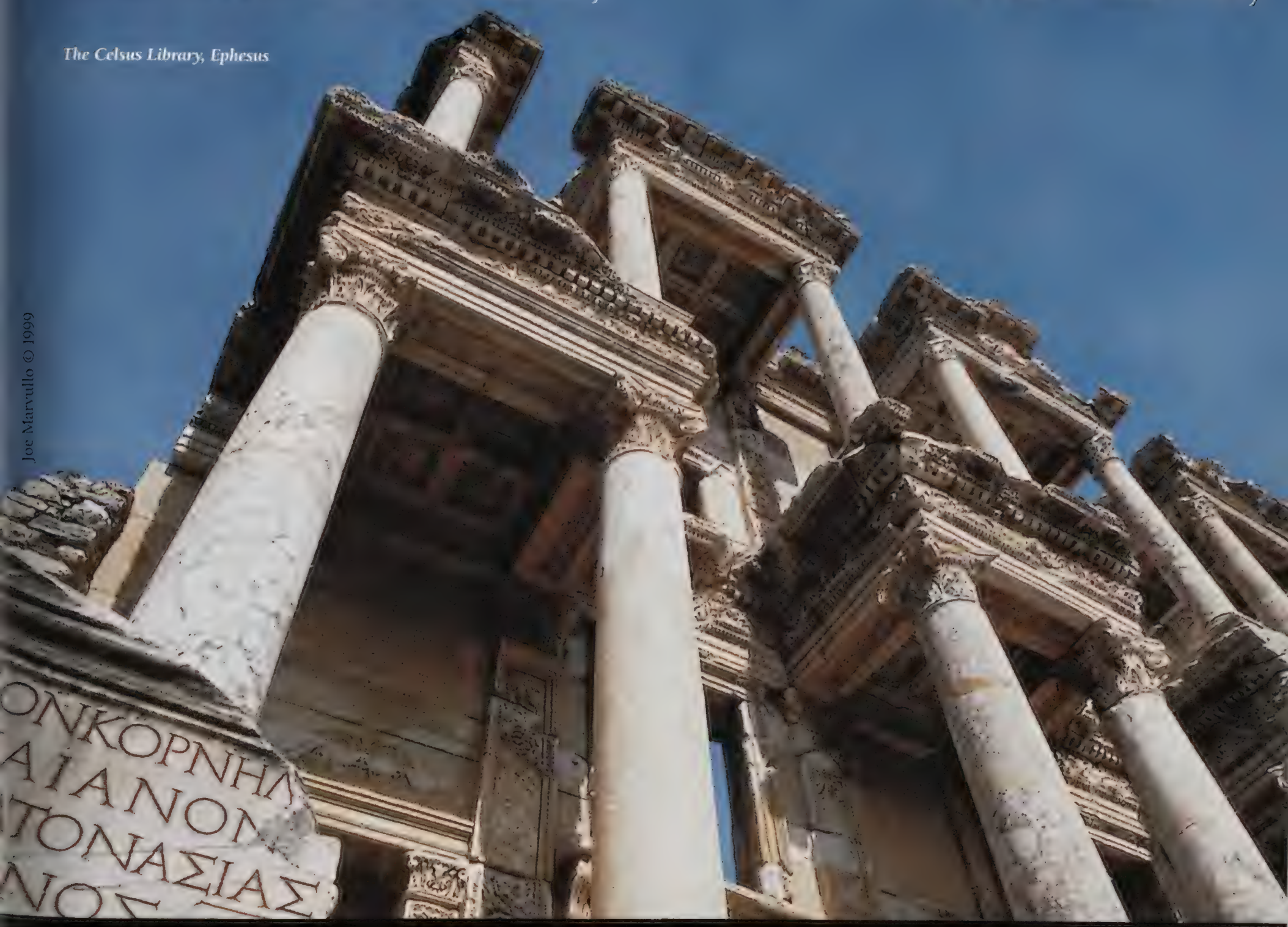

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IN THE VANCOUVER ART GALLERY, THE British Columbia Archives and the Art Gallery of Greater Victoria, the main repositories of Emily Carr's work and memorabilia, which is to say her life's story and achievement, there is almost always some exhibition of what she did, who she was. Last May, for example, the Vancouver Art Gallery held a show juxtaposing early pioneering sketches and watercolors that Carr made at the turn of the century in the native coastal villages of western British Columbia with paintings she derived from them decades later. In the Art Gallery of Greater Victoria there was an exhibition of her late oil-on-paper paintings. And in the British Columbia Archives there was a display of photographs. There is, in essence, no time of the year in which she is not shown and remembered in these three institutions. And she is also well represented in the National Gallery of Canada in Ottawa.

ARTIST EMILY CARR CAPTURED THE SPIRIT OF THE NORTHWEST COAST

Dead now for more than 50 years (she died in 1945 at the age of 73) she remains a living and vital Canadian presence, a legend, a national treasure. Her paintings are familiar, her books are all in print and widely read, her tempestuous life story is knit into the cultural fabric of the country. Yet just next door in the United States, she remains virtually unknown.

If you ask a Canadian if he or she knows who Emily Carr was, you are likely to become the object of a bemused glance, as if you had asked an American who Georgia O'Keeffe was. Carr has, in fact, been called "the Canadian Georgia O'Keeffe, the WASP Frida Kahlo." Interestingly, an international traveling exhibition on the three is scheduled to open in Toronto in 2001.

At breakfast in a B&B in Victoria recently, the question was asked of a woman from Toronto. "Certainly, I'm Canadian," she fired back. Ask the question in the United States and you are likely to get back an uncomprehending "Who?"

In still another manifestation of her immediacy in Canada,

The haunting and powerful *Big Raven* (1931) was based on studies that Carr (above, in her early 20s) made on a 1912 trip to the abandoned Haida village of Cumshewa in the Queen Charlotte Islands.

CANADA'S NAT

IONAL TREASURE

BY BENNETT SCHIFF

Carr has been drawn into a revisionist vortex. Beloved by the people who go to see her work and who read her books, she has at the same time furnished material for a range of individuals with special interests and is also at the center of some very strong and partisan points of view. She has been accused of exploiting the native culture of the Northwest Coast; her pioneering works depicting the impenetrable rain forests of British Columbia are a natural focus for environmentalists; and she is of course the topic of feminist studies. At no time has she been a livelier subject of attention.

She has her critics—John Bentley, for example, former art critic for the Toronto *Globe and Mail*, who wrote several years ago of her "pious twaddle on the subject of God or 'nature.'" The Canadian art historian John O'Brian talks about the "public deification of Carr" in British Columbia.

The writer Susan Crean, in a laudatory piece on Carr's intense paintings of primeval forests, wrote: "What emerged was huge, raw and sexually charged, an astonishing vision for a woman her age and of her age. And right there I think we have part of the explanation for the experts' discomfort with Carr and her genius. How could that batty old baglady who lived on the fringes of late Victorian Victoria, who was well past menopause and probably still a virgin, be credited with such a vision?"

Starting in the early 1930s, Carr's work reflected her fascination with the vast and impenetrable rain forests of Vancouver Island.

SHE WAS, IT MUST BE SAID, NOT THE MOST AGREEABLE of people. There is ample evidence on the record (there are several solid biographies) attesting to the volatility of her personality. She had strong opinions, held grudges, was vindictive, demanding—a confirmed contrarian. She courted eccentricity, seeking attention in the way of a neglected child. She smoked and swore, outrageous behavior for a woman at that time and particularly in Victoria. And she seems to have been one of the loneliest people of either sex of any place or time.

The facts of Emily Carr's life, played out within the prim and proper social structure and strictures of life in Victorian Victoria, are unusual enough even if Carr had not become one of the most considerable Canadian artists of her time. She never married. She studied painting in San Francisco, England and France, when it was quite remarkable for a woman to go abroad to study art professionally. She made a number of intrepid, at times foolhardy, journeys into the remote wilderness and islands of coastal British Columbia. There she produced watercolors, sketches and paintings of native totem poles and lodge houses, structures of importance at the time chiefly only to ethnologists, in lands of interest otherwise only to missionaries and the timber and fishing industries.

For two decades she ran a boardinghouse for a living, hating every minute of it and her boarders especially. She raised Old English sheepdogs to add to her meager income during the difficult years of World War I. Later, when she had to sell off some of her land and the large and powerful dogs became too cumbersome for her to manage, she switched to raising Belgian griffons, small, hairy and feisty dogs of pronounced personalities. If she was going to raise small dogs, they were going to have very large personalities.

She painted outdoors with a parrot perched on her sketching stool. At different times she shared her quarters with, in various combinations, a white rat, a crow, a monkey, a cockatoo, cats and, always, several dogs.

She was born in Victoria, the fifth of six surviving children. There were four older sisters and a younger brother. "My sister Alice," she wrote, "was two years older than I and knew a lot. Lizzie was two years older than Alice

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The Little Pine of 1931 (left) echoes earlier paintings in its use of geometricized forms. A looser, more dynamic style characterizes *Sunshine and Tumult* (center), c. 1938-39. In the lyrical *Cedar* (right), from 1942, the forest's flat, tapestry-like forms fill the entire canvas.

and thought she knew it all. My great big sister *did* know everything. Mother knew all about God. Father knew all about the earth. I knew more than our baby, but I was always wondering and wondering."

Carr's father, Richard, a confirmed Presbyterian who conducted prayers for the children every morning, was an English-born adventurer and strict moralist who had sailed the world as an ordinary seaman and worked as an itinerant daguerreotype photographer in Central and South America. He dug for gold in California, found some, and finally, as a successful wholesaler and businessman, settled in Victoria. There he built a fine house on some eight acres of land about a mile from the center of the little city. There was a sizable garden, paddocks for cows and a barn. An entire acre was left forested. Carr grew up surrounded by an attentive father, a frail mother, who died of tuberculosis when Emily was 14, five siblings and a full panoply of animals, all of whom she cherished and attended to.

Uninterested in children's games, she spent her time with ducks and chickens, and climbed trees to observe nests and birds at close hand. Her passion for animals continued into adulthood. Once, she bought a baby vulture and trained it so it walked by her side. "I had a little tent on a rock with thick bush all round," she later wrote. "The cockatoo sat on the head of the bed. Billie [her dog] slept under the bed. I was in it and 'Uncle Tom' the vulture slept under the floor of the tent. Wherever I went Uncle Tom was at my heels." Throughout her life she lived intimately with animals of all sorts, apparently finding with them a kind of loving intimacy she never could manage with people, no matter how she longed for it.

Carr began to draw early in childhood. She took lessons

Buying a trailer (above) was, Carr once said, the most outstanding event of her life. Dubbed "the Elephant," it enabled Carr (shown here in 1934 with her beloved pets) to work amidst the natural landscape.

Vanquished (above), from 1931, with its prismlike sky, looming clouds and ruined totem poles, represents the culmination of Carr's interest in the old Haida village of Skedans. Typical of her early, more representational Indian paintings, *Skidegate* (right), 1912, depicts a Haida beaver pole.

once a week at school and later with a private teacher. When she was 18, with both parents now gone, she left for San Francisco and enrolled in the California School of Design. After three years learning the basics, she returned to Victoria and started a series of art classes for children in the converted hayloft of the family barn.

Carr had returned to Victoria a grown young woman. "She possessed a generous figure but was not stout," one of her biographers, Maria Tippett, wrote. "She wore her dark brown hair pulled back into a bun, yet allowed some curly wisps of hair to frame her face, which was dominated by large grey eyes that had a slightly oriental slant; above them were beautifully arched brows."

IN 1899 CARR MADE HER FIRST JOURNEY TO UCLUELET, a native community on the west coast of Vancouver Island. She got on very well with the people of Ucluelet and was given the name Klee Wyck, meaning "the one who laughs." Many years later she took that name for the title of a book relating her experiences with the peoples of the First Nations and her lifelong respect and admiration for them. The book won the 1941 Governor General's award for nonfiction, a prize equivalent to the Pulitzer.

She returned to Victoria with studies, drawings and watercolors that furnished her with material she would come back to many years later. Restless and anxious to get away from her sisters, with whom she didn't get along, she decided to go to England to continue her studies. She arrived in London in 1899 and stayed for five years, although she apparently didn't like it at all. It was too big, too foggy, too unhealthy. In effect, its main fault was that it wasn't British Columbia.

In 1903, while still in England, Carr suffered a catastrophic breakdown. She entered a sanatorium in Suffolk, where she was diagnosed as suffering from "hysteria." She was to remain there for 15 harrowing months. Tippett traced the diagnosis back to the original records she uncovered in Suffolk in 1975 while researching her biography of Carr. The designation, Tippett explains, could today encompass anything from neurasthenia, hypochondria and depression to conversion reaction and ambulatory schizophrenia. In any event, Carr's symptoms were clear: headaches, nausea, numbness, stuttering—the result, perhaps, of the conversion of severe repression to physical symptoms.

Carr returned to Victoria in the fall of 1904 and a year later moved to Vancouver, where she conducted hugely successful art classes for as many as 75 students. In the summer of 1907 she went on an Alaskan cruise with her favorite sister, Alice, with whom she sometimes got along, and saw the painted totem poles and communal houses of the Kwakiutl village at Alert Bay. Outside of Sitka on Baranof Island she visited settlements of the Haida and Tlingit peoples. She made her usual studies and resolved then to "do all the totem poles & villages I can before they are a thing of the past."

In 1908 she went by steamship to Alert Bay on the west side of Cormorant Island, the gathering place of the Kwakiutl nation. There she painted totem poles, community houses and tree-hung coffins. She made another trip the following year, going inland, then on to Howe Sound.

The journeys themselves were not remarkable. Other artists had gone to these areas to paint native life. What was unusual was that it was a woman who made these pilgrimages, and a woman who talked with admiration of the native peoples. What was also remarkable were the hundreds of sketches and watercolors she brought back—an inexhaustible archive that would serve as a continuing source of inspiration throughout her life, as her style and vision changed.

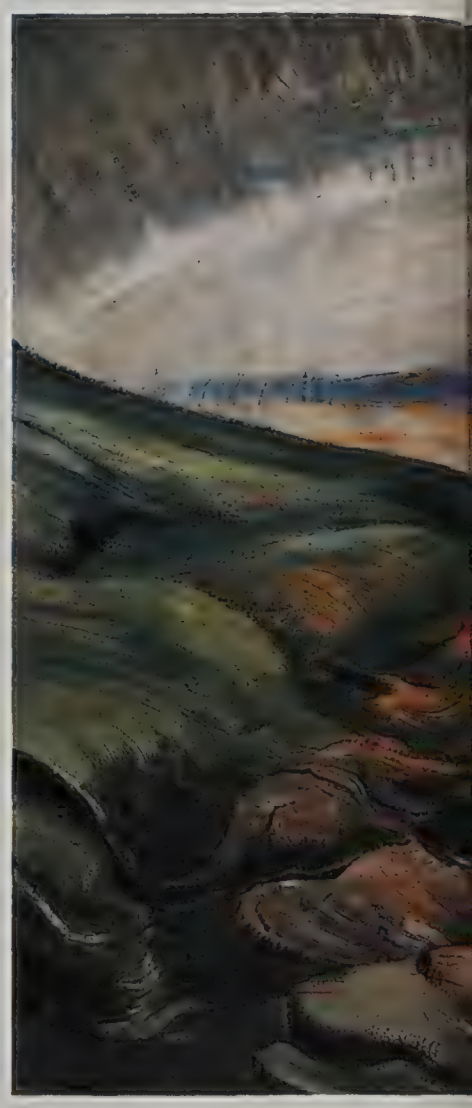
During the following 23 years Carr would make eight trips up and down the coast of British Columbia and into the interior. She visited some 30 native village sites, including abandoned ones in the isolated Queen Charlotte Islands. And she later transmuted the studies she made at these sites into majestic and foreboding works of dark and mysterious power.

"Indian Art," she wrote, "broadened my seeing, loosened the formal tightness I had learned in England's schools. Its bigness and stark reality baffled my white man's understanding. . . . I had been schooled to see outsides only, not struggle to pierce."

CARR HAD FOR SOME TIME BEEN PLANNING TO FURTHER her studies in France, and in 1910, with her sister Alice, she arrived in Paris. "I wanted *now* to find out what this 'New Art' was about," she wrote. "Something in it stirred me, but I could not at first make head or tail of what it was all about. I saw at once that it made recent conservative painting look flavourless, little, unconvincing."

She had arrived only about five years after Matisse, Vlaminck and Derain introduced what came to be called Fauvism, and just as Picasso and Braque were digging deep into Cubism. She learned, too, a great deal about color and technique from the work of the Postimpressionists.

It must be said, however, that in the full maturity of her work—from the overwhelming paintings of forests and trees achieved in the mid-1930s to the ethereal, light-struck oil-on-paper works of her last years—Carr had become an original. These paintings are marked by a unique sensibility and vision—an identification with her subject that is deeply empathetic. You can immediately recognize a Carr tree or forest of the 1930s in the same way that you can an



The rhythmic, swirling composition and brushwork of *Above the Gravel Pit* (1937) create a continuous flow of movement. "I started a new canvas today," Carr wrote, "a skyscape with roots and gravel pits. I am striving for a wide, open sky with lots of movement."

olive tree created by Van Gogh during periods of lucidity when he was a patient in the asylum in Saint-Rémy. Each work becomes at once both an arresting object and an emotional explosion.

Unable to cope with a foreign language, uncomfortable among the students enrolled at the famous Académie Colarossi and as oppressed by the great city of Paris as she had been by London, Carr suffered two breakdowns in Paris, each of them hospitalizing her for six weeks.

"I began to feel myself going, going as I had in London," she wrote. After a recuperative sojourn in Sweden, she returned to France and continued her studies at different communities in the countryside, which she found most congenial. Just before departing for home she had the thrilling experience of seeing two of her paintings displayed at the annual Salon d'Automne in the Grand Palais. Altogether, this time, she had been abroad for 14 months.

Back in Vancouver, where she was by now a well-known figure, she continued to teach and to work. In 1912 she showed 70 paintings and watercolors done in her new French-influenced style. These were very well received. In an interview with a local reporter she spoke enthusiastically of the new painting, its strong color, its indifference to detail. "A picture should be more than meets the eye of the ordinary observer, who sees only what he has been in the habit of looking for," she informed the reporter, who was shocked by the "riot" of color in her work.

Determined to apply her fresh ideas to her favorite subject, she embarked that year on her most ambitious and arduous journey to native villages. "The new ideas are big and they fit this big land," she wrote. Traveling by steamship, stern-wheeler, train, canoe and fishing boat, she visited inhabited and abandoned villages in the north of Vancouver Island, on the Skeena River and in the Queen Charlotte Islands. Though beset by violent storms, thick clouds of mosquitoes and, at times, the hostility of the local people, she produced a prodigious number of sketches and watercolors of house fronts and decaying totem poles.

IN 1913 SHE RENTED A HALL IN VANCOUVER AND showed nearly 200 of her works on native life done over the previous 14 years. In lectures she spoke with admiration of the life of the Northwest Coast peoples, the respect and affection she felt for their dignity and creativity. Although the show received a great deal of attention, both positive and negative, there were few sales. It was at this time, with the subdivision of the Carr family property, that she decided to build a house in Victoria with rooms for rent. She returned there in 1913. She was never to live anywhere else.

Carr painted a number of views of the Strait of Juan de Fuca, the body of water that separates Victoria from the United States. In this oil on paper, done c. 1936, forms are softened and energized by the sense of light that suffuses the picture.

World War I broke out soon after the house was built, and there was little demand for the rooms. There were also few sales of her art. For the next 15 years she supplemented her income by raising chickens, breeding dogs, and selling fruit and vegetables grown on her land. She hooked rugs and made pottery using clay she dug up from nearby cliffs. She resented the drudgery of housekeeping for tenants she had little respect for, and there were arguments, sometimes approaching violence. She grew heavy, made her own shapeless gowns, covered her hair with a velvet-banded hairnet and became a figure of ridicule as she wheeled a baby carriage full of clay or feed for her menagerie down the streets, with at least one dog at her side and frequently a monkey as well. She painted very little during these years.

In time, Carr's work among the native villages attracted the attention of the ethnologist C. Marius Barbeau, the art patron Harold Mortimer Lamb and the amateur but knowledgeable ethnologist C. F. Newcombe. Barbeau and Lamb, in turn, brought her work to the attention of Eric Brown, the director of the National Gallery in Ottawa. Brown, with the assistance of Barbeau, was then mounting an ambitious and comprehensive exhibition of art by Northwest Coast peoples along with works by contemporary artists on native themes.

Brown came to Carr's house in 1927 and chose about 60 of her paintings, watercolors, pots and rugs for possible inclusion in the show. Tippett recounts that en route to Ottawa, Brown wrote to his assistant at the gallery about a Miss Carr of Victoria, who "has been painting fine stuff among the Indians for 20 years & is laughed at by the good early Victorians for her pains."

Brown had spoken enthusiastically to Carr about the work of a loose confederacy of painters who called themselves the Group of Seven. These artists had dedicated themselves to a new and nationalistic Canadian art, uninflected by European work and devoted to the glories of the native wilderness. Carr had never heard of them, but they—and especially one member of the group, Lawren Harris—were to have a profound effect on her life.

THE OTTAWA EXHIBITION WAS A SUCCESS. CARR'S WORK was enthusiastically received, and a new world opened up for her. She was euphoric. Harris' work in particular touched her to the core; it was a revelation for her, "a getting outside of oneself and finding a new self in a place you did not know existed." The pieces, she felt, reached "deep into the vast lovely soul of Canada."

The night after Harris had received her in his studio was a sleepless one for Carr. "Two things had a hold of me with a double clutch. Canada and Art. They were tossing me round & tearing me," she wrote. "Oh, God, what have I seen? Where have I been? Something has spoken to the very soul of me, wonderful, mighty, not of this world. Chords way down in my being have been touched."

Carr was a deeply, if privately, devout Christian all her life, although she did not attend regular services or even, being Carr, approve of them generally. Harris, a confirmed Theosophist whose work reflected a belief in a universal life force, quickly recognized Carr's innately religious nature and sought to teach her more of his beliefs. Although she ultimately rejected Theosophy as being too far from Christianity, she clearly felt a deep spiritual connection between what she saw and what she painted. She found these feelings dramatically exemplified in the poetry of Walt Whitman, a volume of whose poems she always carried with her.

Reinvigorated, she returned to Victoria and set to work reinventing her early Indian sketches, interpreting them in a new way. Employing shafts of vibrant light and dramatically placing her forms as brooding, mysterious presences in increasingly abstract backgrounds, she animated her canvases with a sense of enveloping spiritual force. She continued to refine this vision for the rest of her life. Her last oil sketches portray nature with a radiance and tranquillity she could never find in human society.

Beginning in the early 1930s, Carr turned her attention to painting the great rain forests of the western and northern coasts of Vancouver Island—impenetrable stands of cedar, Douglas fir and hemlock, which were so thick along the coasts that the local inhabitants often had to burn out sections along the shoreline to find flat land to build upon. With these paintings, she created a body of work at once invested with her personal vision of these ageless, silent, mysterious places and her association of them with a transcendent force. The same spirit enlivens what could be called her "portraits" of individual trees, all imbued with singular personalities.

In her journals, published posthumously as *Hundreds and Thousands*, she wrote: "I have done a charcoal sketch today of young pines at the foot of a forest. . . . It should lead from joy back to mystery—young pines full of light and joyousness against a background of moving, mysterious forest. . . . Every day I long for the woods more, to get away and commune with things. Oh, Spring! I want to go out and feel you and get inspiration. My old things seem dead. I want fresh contacts, more vital searching."

IN 1933, UNABLE ANY LONGER TO UNDERTAKE EXHAUSTing journeys, she came on something that made her eyes light up. She had sketched in "shanties . . . cabins, tents, log huts, houseboats, tool sheds, lighthouses—many strange quarters," she wrote. "Then one day, plop! into my very mouth, like a great sugar-plum for sweetness, dropped the caravan. There it sat, grey and lumbering like an elephant, by the roadside—'For Sale.'"

She bought the trailer for a relatively modest sum, dubbed it "the Elephant" and furnished it with a bed, bookshelves, sleeping boxes for the animals (four griffons, a monkey and a white rat) and an oil stove. In spring and autumn she would have it hauled to nearby wooded and seaside areas of Victoria and spend months living out of it. As usual she worked with determination and intensity, and it is during this time that she developed the technique of diluting oil paint with gasoline and white house paint and applying it to cheap manila paper.

Although there was a good deal of activity in and around the Elephant—work, the animals, friends who came the short distance from the city to visit—there were also piercing moments of loneliness and a dreaded sense of isolation. "Such a terrible loneliness and depression is on me tonight!" she wrote in her journal. "What a lot I'd give tonight for a real companionable pal, male or female, a soul pal one wasn't afraid to speak to or to listen to. I've never had one like that. I expect it is my own fault. If I was nice right through I'd attract that kind to me."

Carr's later works, of trees and water and sky, are her masterpieces, along with her late Indian and forest scenes. Together they form a body of work that marks the emergence of one of the continent's most significant visionary painters of the 20th century. For her a picture had become "a movement in space." In effect she became what might have been least expected of her, a virtuoso painter.

Carr continued her seasonal sojourns in the Elephant until 1938. That same year she had a hugely successful solo show at the Vancouver Art Gallery, from which, according to Robin Laurence, the author of a catalogue essay on Carr, "she derived the happy sense that her art had truly spoken to the people of British Columbia."

In her later, more abstract paintings of forests and individual trees, Carr starts to move in closer to her subject. A sensuous rhythm and emphasis on sculptural form characterizes both *Tree Trunk* (above), from 1930, and *Forest, British Columbia*, 1931-32.

The last eight years of Carr's life were marred by severe health problems. But a series of heart attacks, on top of strokes, thrombosis and asthma, did not keep her from working almost until the end. And it was during these trying years, during periods when it was particularly difficult for her to handle brush, paint and easel, that she began seriously to write.

In addition to *Klee Wyck*, her first published book, she wrote *The Book of Small*, recollections of her childhood; *The House of All Sorts*, in which she dealt forcefully with her despised boarders and other aspects of her life as a landlady; *Growing Pains*, an autobiography of sorts; *Pause: A Sketch Book*; and *The Heart of a Peacock*, a miscellany of various interests and enthusiasms. Throughout her work she wrote of animals with an individuality of outlook and an empathy that is distinctive, deeply touching and wonderfully entertaining. Not the least of her books were the journals, in part a record of her life as an artist, in part a spiritual journey into solitude and longing.

The year 1944, the one before she died, was a good one for Carr. Although in ill health, she could still use a wheelchair to visit nearby Beacon Hill Park, the beautiful expanse of meadow, trees and sea cliffs where she had spent many happy times as a child. Her book *The House of All Sorts* was published and she saw the first sales of her work in a commercial gallery: the Dominion Gallery in Montreal sold 46 paintings—oils, watercolors and sketches—for which Carr received a total of about $1,260 Canadian. It was more than she had ever received for her work.

IN VICTORIA TODAY, YOU CAN SPEND A PLEASANT AND informative day visiting Emily Carr sites on foot: the building that housed Richard Carr's wholesale grocery store; the house that he built in which Carr was born; the building Carr ran as a boarding house; Alice's house around the corner, which Carr ran as a school; and beautiful Beacon Hill Park. Nearby is Ross Bay Cemetery where Carr is buried in the family plot.

In the British Columbia Archives, just by the provincial legislative buildings, you can chart the course of her career. It holds 13,000 catalogued items of Carr-related material, notebooks, sketches, watercolors and paintings, including failures. It is the kind of material you probably would not see in a museum or gallery show. Yet it is through such work that you can best understand the struggle of an artist striving for perfection. You can see the sweat and toil involved, the exasperation and the turmoil. You can also see a late masterpiece that sweeps you away with the fresh breath of it—her *Sea and Sky* of 1933. "A picture," she wrote in her journals, "is an expressed thought for the soul." Looking at her late work you can understand that.

Just before Carr died she had received the startling news that the University of British Columbia was planning to confer the degree of Doctor of Letters on her. In a nursing home when the news came, she was so excited that she wanted to shout out to those staff members who had treated her like a "half wit": "I'm nearly a Doctor, the University are making me one so there!"

She didn't live to receive the honor. Three days later she was dead. The honors came later. Ask a Canadian.

Contributing editor Bennett Schiff last wrote for SMITHSONIAN *on the Italian Renaissance painter Dosso Dossi in January 1999.*

FEATHER STAR

UNKNOWN

JAWFISH

FLOUNDER

AS ITSELF

SNAKE EEL

MASTERS OF

Mimicry

PHOTOGRAPHS BY ROGER STEENE

BABY CUTTLEFISH

STINGRAY

Sea creatures beware, a clever octopus has your number. Members of a genus of cephalopod new to science have been caught on film in postures that resemble more than a dozen marine animals. Not only can these long-armed pretenders appear to mimic the shape of a flounder, for instance, but they can imitate the fish's swimming motion by undulating gently across the sand. These Indo-Pacific octopods also can bury themselves in the sand like a jawfish, revealing only their eyes, or float with arms looped like the tentacles of a jellyfish. Because their repertoire includes subjects both venomous (sea snakes) and benign (feather stars), it's not clear whether their apparent mimicry serves as a means to ward off predators or to deceive potential prey. Aussie photographer Roger Steene, in his recent book Coral Seas (Firefly Books), is among the first to publish photographs of the canny creatures in a wide variety of poses. *—John F. Ross*

The Van Exels (from left: Carolyn; Jennifer, 14; Hank; Sarah, 15; and Adam, 17) flank No. 1007, their prize dairy cow. Right: Jennifer and Tabby take a milk break.

IN THE LAND OF milk and money

YES, WE'VE GOT MILK AND PLENTY OF IT, FROM A VENERABLE BUSINESS THAT IS HIGH-TECH, ULTRA-EFFICIENT AND, FOR MANY, STILL OFFERS A REWARDING WAY OF LIFE

BY JAY STULLER

PHOTOGRAPHS BY PHIL SCHOFIELD

THE MORNING SUN IS AN hour below the horizon of California's Central Valley. Traffic on Interstate 5, which bisects Hank van Exel's 2,000-acre farm, is sparse and quiet. In nearby Lodi, folks rest in the depths of REM slumber. Yet in the 5:30 gloom, leading a string of 39 other cows toward the softly lit milking parlor, holstein No. 1007, who also goes by the name of May, is clearly very anxious to get started.

A beefy man with a rolling gait, blond mustache and pale blue eyes, the 42-year-old Van Exel watches appreciatively as 1007 nudges into her customary spot in the parlor's first stall. The farmer has fallen into the habit of starting his morning rounds this way, pausing to observe this particular holstein give milk. She is, he fondly concedes, "kind of special."

One of Van Exel's employees, milker Raul Espinoza, first douses 1007 with a gentle sprinkler bath. A former bullfighter in Mexico—and a man whose relationship with bovines has obviously taken a nurturing turn—Espinoza cleans her four teats with a sanitizing solution. He then deftly gives each teat a couple of squeezes until fluid squirts forth, hooks them up to a quartet of automated milking machine cups and hits a switch.

The holstein's eyes, liquid brown and huge, roll in contentment. And perhaps relief. "Not to sound indelicate," offers Van Exel, "but my best guess is that getting milked must feel like going to the bathroom after drinking a few bottles of beer."

At first glance the cow looks much like any other of the dairy's 1,600 black-and-white holsteins. As with all of Van Exel's animals, 1007 is milked and sent on her way within five minutes. Like the others, she receives one of four different feed rations specifically formulated by a nutritionist to maintain optimum health and maximize milk production. In an operation that continues around the clock, 1007 will return for her second milking eight hours later, and then again at 9:30 that evening.

During the 4½ minutes Espinoza has her on the machine, 1007 drops nearly 50 pounds of milk. Her daily total equals more than 17 gallons. And while the average U.S. dairy cow gives about 17,000 pounds during its ten-month lactation period, 1007 personally sends about 38,000 pounds, or roughly 4,400 gallons, to the American milk market. "That's what you get from a happy cow with the right genetics, right care and right feeding," says Van Exel of an animal that yields 11,000 pounds more a year than the

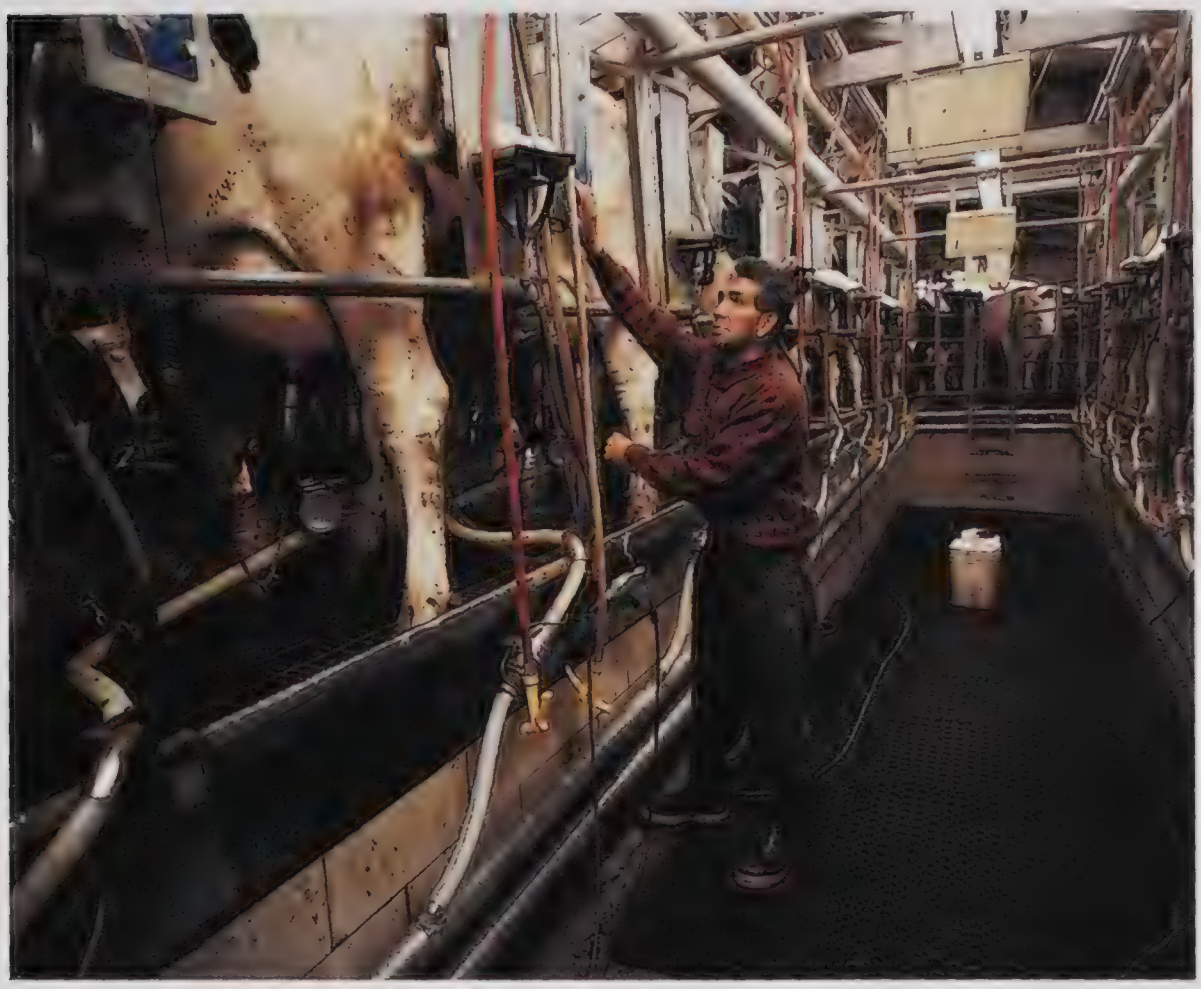
America's 9.2 million cows, which gush about 18 billion gallons of milk each year, are the foundation of a $75 billion industry.

herd average. (The current record holder is a holstein in Marathon, Wisconsin, named Muranda Oscar Lucinda-ET, who produces a whopping 67,914 pounds a year.)

Much of Van Exel's spread looks, smells and sounds like dairies of the past. The aroma of fresh milk and feed, and barns hosed clean of manure and urine, fills the air. The ruminants moo, and from the first of four chambers in their stomachs regurgitate fist-size cuds, which they earnestly chew. The rhythms and priorities of farm life—with the long hours, county fairs, few vacations and the welfare of the animals placed above all else—for the most part remain unchanged.

In a competitive and consolidating industry, however, a major player like Van Exel is as much a CEO as a hands-on farmer, with a staff of about 45 full-time and seasonal workers, including a nutritionist, a geneticist, a veterinarian and, of course, a bullfighter who now milks cows. Van Exel is an environmental manager and a scientist of sorts, as comfortable with computers as with barbed wire. For every hour spent in the barn, Van Exel may spend three working on spreadsheets, tracking finances to the penny, feed-to-milk production figures to the ounce and generations of breeding matches that are essential to improving the herd.

In fact, the most valuable output of 1007 may not be her milk but her calves, worth several thousand dollars apiece. Her embryos are worth a couple hundred dollars each. Fertilized through artificial insemination and transplanted into surrogate mothers, her multiple eggs allow her to carry the one calf she needs to lactate, yet also spread her progeny faster and wider. And prodigious cows like 1007, which produce as much as any two animals, are one of several forces that conspire to put less productive farms out of business.



Former Mexican bullfighter Raul Espinoza has a new relationship with bovines: nowadays he sings to the cows as he milks them each morning.

According to the U.S. Department of Agriculture (USDA), 116,680 dairy farms are all that remain from the 334,180 operating around the country in 1980. The decline in the number of farms is part of a steady trend that dates to the start of this century. In Washington state's Snohomish County, about 400 dairies thrived in the 1960s; today there are fewer than 75. Increased feed and labor costs squeezed out some. Environmental concerns over manure and urine contaminating streams and groundwater compelled others to build expensive treatment facilities, or risk stiff regulatory fines and public censure, or fold. Encroaching urbanization has caused still more to sell herds and their land. For farmers with no room to accommodate more than a couple hundred animals (once a handsome-size herd), it has become increasingly difficult to compete against big operators. Despite the shrinking number of farms, however, dairymen such as Hank van Exel and cows like 1007 still meet the American demand for milk and its products.

Because sustenance leads the hierarchy of all needs, producing food is the most basic occupation in any society. And among the variety of vittles we consume, milk and the myriad products into which it is made are perhaps the most fundamental to our diet. At the same time, the production of milk has an enormous impact upon the commonweal.

America's 9.2 million cows, which gush about 18 billion gallons of milk each year, are the foundation of a $75 billion industry. "Dairy is among the top three agriculture sectors in most states," explains Andy Novakovic, the department chairman and professor of agricultural economics at Cornell University. In California, the nation's

Humans are the only creatures that are weaned from their mothers and then continue to drink milk, albeit that of different species.

largest dairy producer since 1993, a million cows generate nearly $4 billion worth of milk and cream, nearly double the earnings from grapes, the state's number-two crop.

"No matter whether prices are good or bad, farmers keep on producing milk," Novakovic adds. "They have to, since milk has to be harvested two or three times a day and immediately sold, because it's a perishable product that can't be stored until the market improves, like with wheat or corn. But even though many farms are under stress, dairies and milk send positive reverberations throughout the entire economy."

Milk, it seems, does the body politic good, creating jobs for milkers, truck drivers, processing-plant workers, veterinarians, government inspectors and even professors of agricultural economics. The industry means employment for marketing experts, geneticists, grocery-shelf stockers, folks who make packaging and the creative imps who developed the ubiquitous national "Where's your mustache?" advertising campaign.

For a substance that's roughly 88 percent water, milk is a sublimely protean liquid. Only about 30 percent of what's produced is sold in its fluid form, including whole milk, skim milk, sweetened condensed, buttermilk, low-fat, chocolate-flavored, and eggnog and other variations. About 25 percent is processed into ice cream, ice milk, butter, yogurt and sour cream. The rest is made into cheese, splendid cheese, a growth industry for the past 20 years.

Milk can be converted into fresh ricotta, Quark for baking and Italian-style Crescenza. It's made into soft and soft-ripened forms that include Brie, Camembert and Schloss, which are creamy and aromatic. It's turned into bulwarks like cheddar, brick, mozzarella and Monterey Jack, along with the piquant hard cheese category that includes Romano and Parmesan.

Imagine chewing shredded wheat not smothered in milk. As one of the California Milk Processor Board's crafty "Got Milk?" commercials suggests, what looks like a heaven full of chocolate cupcakes may in fact be hell if the eternal refrigerator contains nothing but empty milk cartons. Udder damnation. Since dairy products account for 10.7 percent of total food sales, there's really nothing, save for energy, that's as much a part of daily life as milk and milk products.

This shouldn't come as any great surprise since we are, after all, mammals. The infant human, monkey and mink all suckle from a mother's breast. Milk contains all the nutrients needed to sustain an infant for the first few months of existence. Among the different mammalian species, milk has many similarities, in that it's mostly water and contains fat, protein, lactose and a variety of vitamins and minerals.

The greatest difference is the fat content of the milk, says Ed DePeters, a professor of animal science at the University of California, Davis. "A seal's milk is about 53 percent fat, which is incredibly rich. It probably provides the pup with the extra energy it needs to be in cold water," he explains. "The fat content in polar bear milk is 31 percent. The human brand is 4.5 percent fat, which is similar in fat content to milk from Jersey cows and slightly fattier than the holstein's 3.5 percent."

Luis López mixes a batch of corn, barley, soya meal and trace minerals for the weaned calves that hungrily watch his every move. Milking cows receive 100 pounds a day.

While polar bear milk probably could be consumed by a human (if one dared collect it), DePeters points out that we have more routinely drunk the output of many other animals, including goats, camels, sheep, horses and llamas. In fact, humans are the only creatures that are weaned

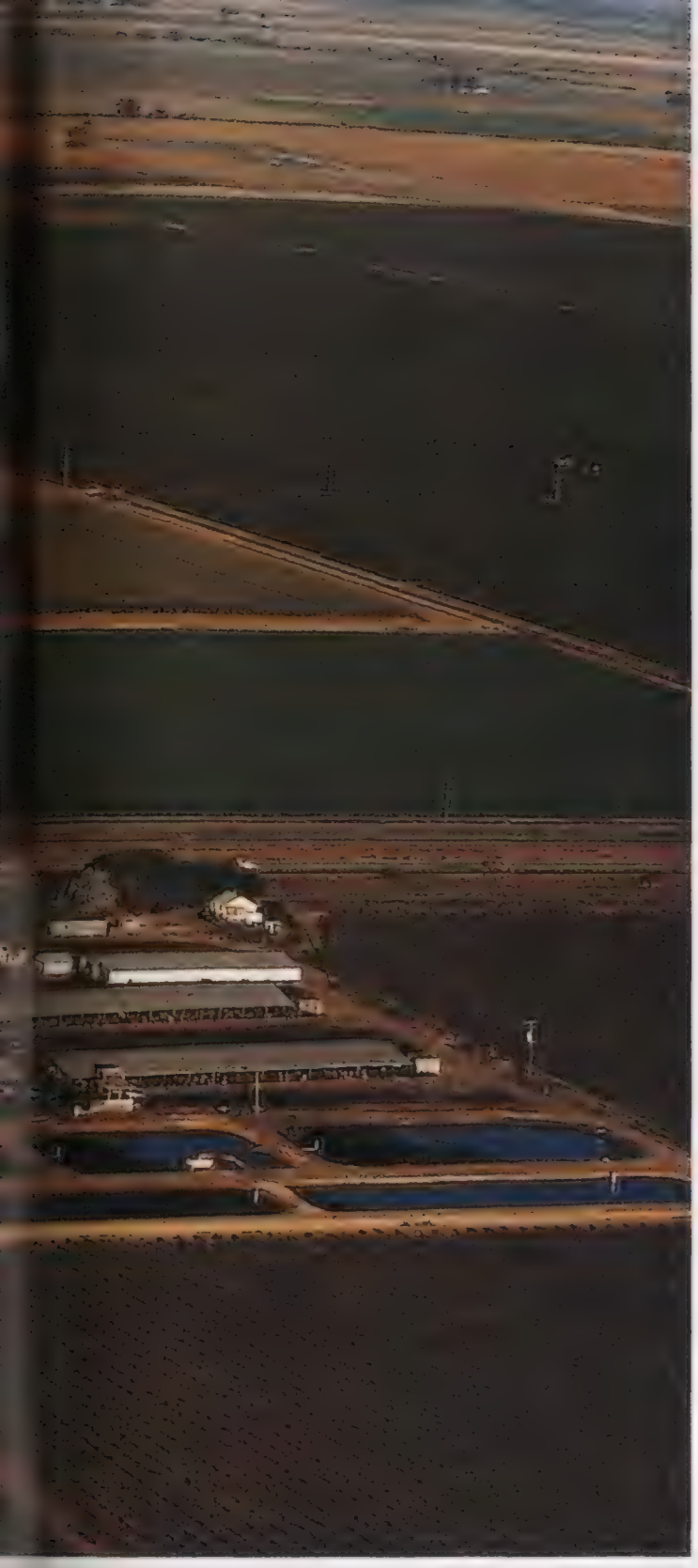
The 2,000-acre Van Exel farm stretches out on both sides of Interstate 5, which bisects the picture horizontally. About half of the land is used to grow feed.

from their mothers and then continue to drink milk, albeit that of different species. As domesticators of once-wild beasts, we consume dairy products because we can, and because milk, butter and cheese offer a lot of convenient nutrition.

Columbus brought cows to the New World on his second voyage in 1493. A herd of 100 cows arrived in Jamestown in the 1600s. Before long, the milk cow was a fixture on the small American homestead, as indispensable to a family as papa's rifle. In the years just before the Civil War, industry began drawing laborers and families to urban manufacturing centers. Since both men and women spent long hours at the mill, new mothers began substituting cow's milk for breast milk fairly soon after they gave birth. City dwellers needed milk, and the new railroads carried it from agricultural areas to the towns and cities. But the industry got off to a rocky start. Pasteurization didn't become routine until after World War II. Meanwhile, milk-borne disease was all too common; in the years between 1911 and 1915, there were 238 confirmed milk-borne epidemics.

Milk cans, 50 years ago a familiar sight on rural roads, have now given way to what's virtually a closed system. From the moment milk leaves a cow's teat, it travels through pipes and into refrigerated tanks on the farm. From there it's transferred into insulated trucks and is taken almost daily to a processing plant, where it's tested, pasteurized, processed, tested again and then put into cartons without exposure to harmful microbes. Refrigerated trucks can get some fluid to the market shelf within 24 hours of the milking, and it's guaranteed to remain fresh for two weeks or longer.

Health concerns about milk have arisen, although not about contamination. One of the richest sources of absorbable calcium and a stew of other nutrients, whole milk also contains a goodly amount of calories and fat. As a result, diet-conscious Amer-



Carolyn and Hank van Exel go over the paperwork of what is not only a business but, at least in part, a technical, even a scientific, enterprise.

icans have cut their whole-milk consumption by about 50 percent over the past two decades while low-fat milk sales have virtually doubled.

Activists complain that farmers give cows antibiotics, a practice that could compound the problem of drug-resistant bacteria. But required testing for drug residues of every tankerload of milk has eliminated much chance of any drug-contaminated milk getting to the market. A growth hormone known as BST is used today by about 13,000 farmers on about 30 percent of the nation's dairy herd. The manufactured version of a naturally occurring hormone, it increases an animal's milk output by as much as 15 pounds a day. The Food and Drug Administration has concluded that milk and meat from treated animals are safe.

Fluid milk sales have been stagnant for decades, even though marketing data suggests that 98 percent of all U.S. households purchase the stuff. The average American consumes about 25 gallons annually, but total fluid milk consumption, about 55 billion pounds, is not appreciably higher than 1974's 52.5 billion pounds—despite significant population growth.

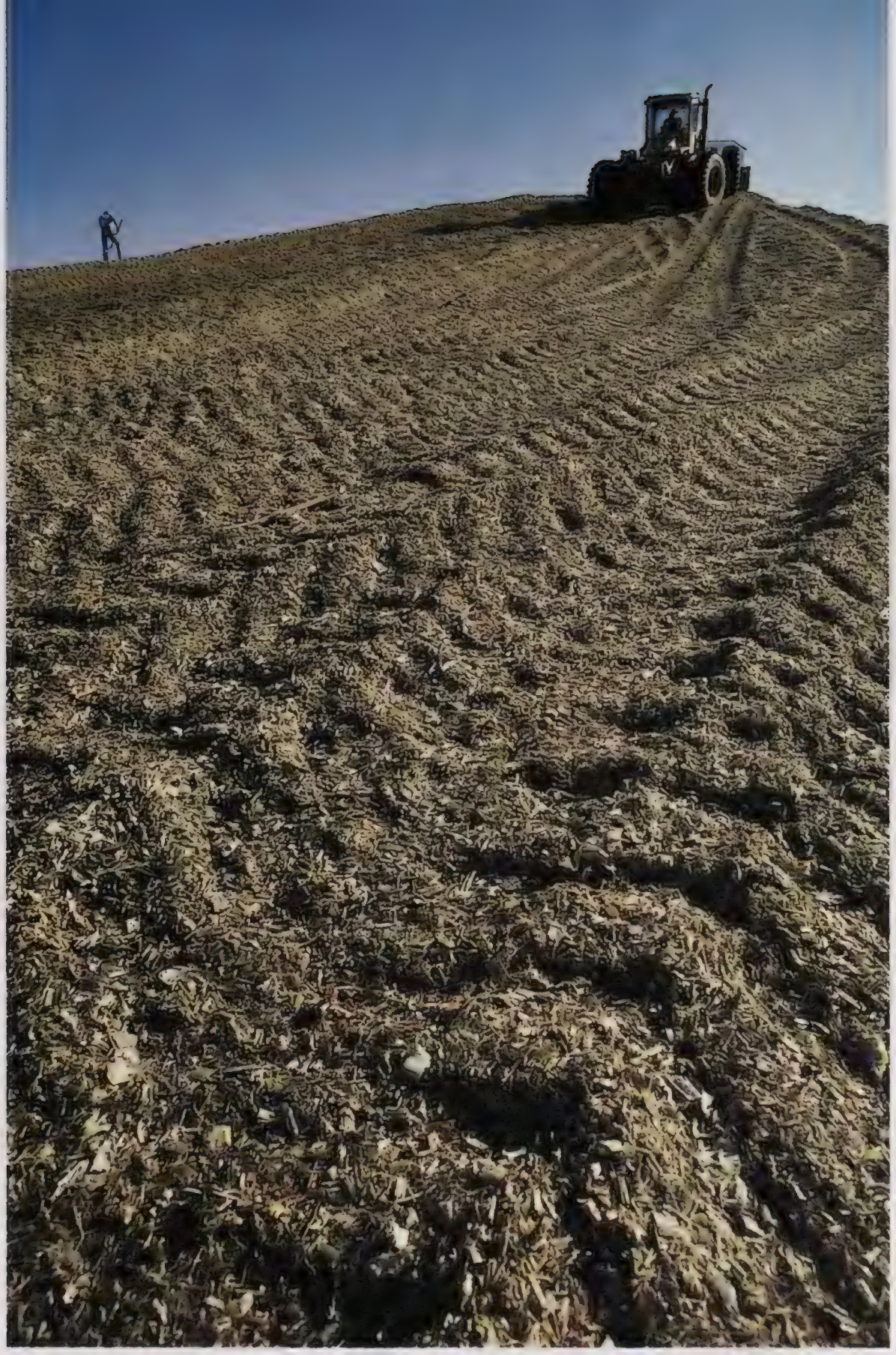
American's don't consume less fluid per capita. They just down more and more soda, juices, alcoholic beverages and designer water at a buck a bottle, of all things. The milk industry is plainly in a beverage battle.

Today, the National Fluid Milk Processor Promotion Board spends about $110 million annually on its milk mustache campaign. Launched in 1994, the mustache ads are very "in" with the teen crowd, who collect the images like baseball cards. Equally ubiquitous are the California Milk Processor Board's "Got Milk?" spots, which Hank van Exel helps fund to a tune of $16,000 a year. The campaign "Got Milk?" went nationwide in 1995.

Along with hustling to move its product, the milk business has also been subjected to some of the most complicated pricing arrangements laid down upon any industry. That includes the federal "Eau Claire rule," which among other things enables farmers to be paid progressively higher prices the farther their farm is from that Wisconsin city. There are also federal price supports—set to expire in the year 2000—and the USDA is to announce a reform of the pricing system later this year.

California opted out of the federal program some time ago. With its own system, the state makes processors pay farmers a minimum price that in recent years has ranged from $1.03 to $1.25 per gallon.

America's milk policy evolved in the 1930s as part of an effort to protect farmers and consumers alike. In the days before refrigeration, milk was extremely perishable. Areas such as the South were subjected to huge seasonal swings in supply. Chronic shortages sometimes hit because cows don't give much milk in hot and humid weather. Price guarantees were designed to smooth out such market



bumps and and get the milk where it was needed.

The Eau Claire rule came about in the 1960s, as trucking on the expanding Interstate System was making it easier to ship milk nationally. Midwest farmers wanted to sell their surplus product to areas with shortages. In addition to new technologies, the Eau Claire rule made dairy farming in many areas outside the Midwest much more profitable.

By the 1980s, the country suddenly found it had more milk than it needed. "Milk and cheese surpluses grew so large that the government paid farmers more than $1 billion to thin their herds," says Ed DePeters. "The government bought tons and tons of surplus cheese."

The government set out to cut milk production by 8½ percent and accomplished its goal by simply buying up dairy cows, most of which ended up as hamburgers and steaks. The program became a cause célèbre when the public discovered that the cows were being branded on their faces so none would reappear in a dairy herd.

Today, enough milk is produced to supply the market. Gary Imm, CEO of Clover-Stornetta Farms, a milk processor in the city of Petaluma, about a 45-minute drive north of San Francisco, claims his operation earns only pennies on the gallon of milk. With 160 employees, the company processes about 14 million gallons of milk annually, mostly from Sonoma and Marin counties. Like dairy farms, the processing business is also consolidating.

"We're a fairly small independent that supplies about 3,000 customers, including schools, markets and convenience stores, and we do face competitors getting bigger," explains Imm.

Left: Hank's dad, Adam van Exel, checks the corn crop. Top: A tractor compresses cut-up corn stalks for storage as silage.

"My particular expertise is in upgrading the herd through embryo transplants and matching the genetics of cows to superior bulls."

"Distribution has always been a regional business, but now the larger companies are buying local distribution points," he says.

One thing we can figure on is that while the number of farms shrink, the aggressive survivors will keep consumers plentifully supplied in milk. "In some ways the American dairy farmer has grown almost too productive for the industry's collective good," adds Cornell's Novakovic. "It's a curse in the social sense, in that dairy farmers are often important members of a community, with ties to a town that could go back several generations. If they leave an area, the town loses more than a farm."

Ed DePeters sees those sociological changes in his classroom at U.C. Davis, where he has taught since 1979. "I used to have quite a few students who intended to earn their degrees and go back to the family farm and one day eventually take over. Now you might have only one or two out of an entire class. We still have lots of children of dairy parents. But they plan to become vets or go into some other aspect of the industry."

There's plenty of work, because the science of dairy farming is relentless. "Dairy technology grows outdated almost as fast as computers," says DePeters. "A typical milking-parlor design is good for about ten years, then the whole thing has got to be replaced at a big capital expense.

"But the real key is management: the genetic breeding programs; the cow-comfort touches that keep the animals cool in the summer and warm in winter; and feeding, which makes a world of difference in how each cow performs." (In fact, one of DePeters' research specialties is how a cow's diet can lead to butter that's easier to spread.) "This is why the American dairy cow's average production has risen from 5,842 pounds in 1955 to 8,305 a decade later, and

Hank van Exel holds the future in his arms, a 14-day-old calf that will join the herd.

double that output today. California's cows average 20,458 pounds per lactation." And then there are the special animals, like 1007.

Adam van Exel probably never envisioned owning such a productive cow. In fact, he couldn't have envisioned himself doing many of the things that occupy his son Hank's time. "Dad's from the old school, which is pretty understandable," explains Hank. "Here's a kid who grew up on a dairy farm in Holland, hid out from the Nazis for a year, came to the U.S. and spent three years in Alabama working on a dairy farm for $5 per month. He and my mom, Pietje, then made their way to California and worked as milkers until they could buy a small 60-acre farm, mostly with sweat equity. He used to tell me I ought to be out actually milking the cows like he did. But I've got more paperwork in a day than he had in a month. He probably still thinks I should be milking."

One of three children, Hank attended California Polytechnic State University in San Luis Obispo, majoring in dairy science. He also took lots of business classes, which in retrospect was fortuitous course selection. In 1976, with Hank just a half-semester short of graduation, Adam had the first of two open-heart surgeries. Hank returned to run the farm, and eventually became his father's partner.

"My particular expertise is in upgrading the herd through embryo transplants and matching the genetics of cows to superior bulls," allows Van Exel, sitting in his office, which was once the living room of an old farmhouse. The kitchen is now a lab where frozen embryos are examined before they're transplanted into surrogate cows. In another room is a computer. The walls of his office are covered with ribbons, medals and plaques won at fairs. His phone rings every couple of minutes. A directory of the U.S. Congress sits on his desk.

"Well, it's my expertise when I don't have to deal with that stuff," he says, acknowledging the congressional directory with a sigh. "I'm on the Western United Dairymen's board of directors. We have to watch every bill, federal and state, because while it might look like legislation to fund new flowers for Golden Gate Park, it might really shut down a Central Valley farmer's access to water. What I do mostly is concentrate on getting contracts written, feed ordered, and making sure my workman's compensation is in order. Environmental issues take more time than ever."

Van Exel pushes back his cap and wiggles in his chair. "It used to be that dairy farmers were considered the good guys," he says in a measured and matter-of-fact tone. "Now you have folks saying we mistreat animals, pump them full of drugs and are terrible environmental polluters. What some people don't understand is that

In his feed-mixing area are piles of almond hulls, malt from a local brewery, distiller's grains and beet pulp, by-products that would otherwise go to landfills.

On a modern dairy farm, the milk never sees the light of day. It moves from cow to chilled storage tank to truck without any chance of contamination.

good farmers constantly reinvent their practices in response to new knowledge. We used to think antibiotics were good, but I've really cut back on my use of medicines, except to help sick animals recover. And if my cows aren't totally comfortable, they won't give me as much milk."

Van Exel has also built loafing barns, places where cows can lie down, with intricate manure-flushing systems that keep the bacteria count down. The mixture of manure, urine and water then goes to a pair of huge "lagoons," earthen holding ponds that are each 300 feet wide, 3,000 feet long and 30 feet deep. As do the majority of dairymen, Van Exel spreads most of this on his fields as fertilizer.

Not long ago the *San Francisco Chronicle* reported that one farmer, who owns just 56 acres, had been hit with a $50,000 fine because his waste runoff violated water quality laws.

"Our drains lead to game preserves and the Sacramento Delta," says Van Exel. "The last thing I want is to see my name in the paper. So I'm thinking of building a treatment plant that would reduce my cows' wastes to solids that I could sell as fertilizer, just like some cities do."

It would also be another example of recycling, which dairy farms do amazingly well, especially with the use of feed. Van Exel purchases relatively little straw and grain, and grows much of his own corn. He relies on the ruminant's remarkable ability to digest and draw nutrients from an unusual variety of food. In his feed-mixing area are piles of almond hulls, malt from a local brewer, oat silage, distiller's grains and beet pulp, by-products that would otherwise be trucked off to landfills if they weren't fed to cows.

"Cows can eat bakery waste like bread and cookies, potato chips that don't turn out right, and a lot of other things humans won't eat," says DePeters. "In this area, cows can actually be an environmental benefit."

Most everything on the farm is done for the benefit of the cows. After watching 1007 giving milk in the morning, Van Exel heads straight to the farm's six-stall "hospital." Here sick animals are segregated and cared for, and it is always his first priority on any given day. "They could come in with a touch of mastitis, a bad foot or a stomachache," he says. "Ruminants can get a displaced stomach, and sometimes the vet has to operate on them."

Van Exel's milking animals consume about a hundred pounds of feed and another hundred pounds of water each day. He keeps a close watch on the conformation of his animals. A few decades back farmers bred for large bags, only to find that animals with them suffered from pulled ligaments because they could not support the weight. On the scale, No. 1007 is the cow equivalent of an NFL offensive lineman; at some 1,700 pounds, she weighs about 500 pounds more than a typical holstein. "That can be tough on feet and ankles if you don't also breed for strength," says Van Exel.

Dairy cows on a modern farm have a life expectancy of five or six years. Cows first lactate at 24 months, and typically are good for about four years of maximum producton.

(A cruel truth: there is one downside to being a cow that's lived the good life yet can no longer give enough milk. You end up in the supermarket as prime hamburger.)

In any event, Van Exel's milk is picked up daily and goes to a local cooperative, from whence it makes its way into the San Francisco and Sacramento markets.

Milk, it seems, can get in one's blood at either end of the dairy business. It certainly seems to infuse Mike Forbes, whose workday begins shortly after 1 A.M. Over the next five

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As sunrise colors the sky, Mike Forbes prepares to deliver milk and bread to one of his customers, a routine he has followed for the past 32 years.

hours the independent distributor will stop at between 75 and 100 homes, delivering milk, cheese, sour cream and other foodstuffs. "I am a milkman," says Forbes, "and have been one for 32 years. It's a business that helped me raise eight kids, and it's been a wonderful way of life."

In 1950 more than half of all milk was delivered directly to homes, a service that once was a fixture of American life. Today, less than 2 percent of all milk is hand-delivered to the back porch.

Many of Forbes' customers are two-career couples with children, who buy an average of 2.5 gallons of milk a week. Forbes charges a modest $4.95 per month for the delivery service and $3.59 for a gallon of milk, about as much as the local stores. "It's really a great time of day to be at work," claims Forbes. "You don't smell the fumes from other cars and the streets are really quiet.

"But the funny thing is, I've never met an awful lot of my customers in person," he continues. "I talk to them all the time on the phone, but most are still asleep when I make my deliveries. Some customers want me to put the milk in their refrigerator and leave me a key to the house. It makes me feel like part of their family."

While milkmen are few in number, they aren't a truly endangered species. "Some folks think I stay in business because this is a nostalgia thing," says Forbes. "My customers don't think it's nostalgia. They just like having fresh milk brought to their homes. But most important to me is that it's an honest living. A clean living."

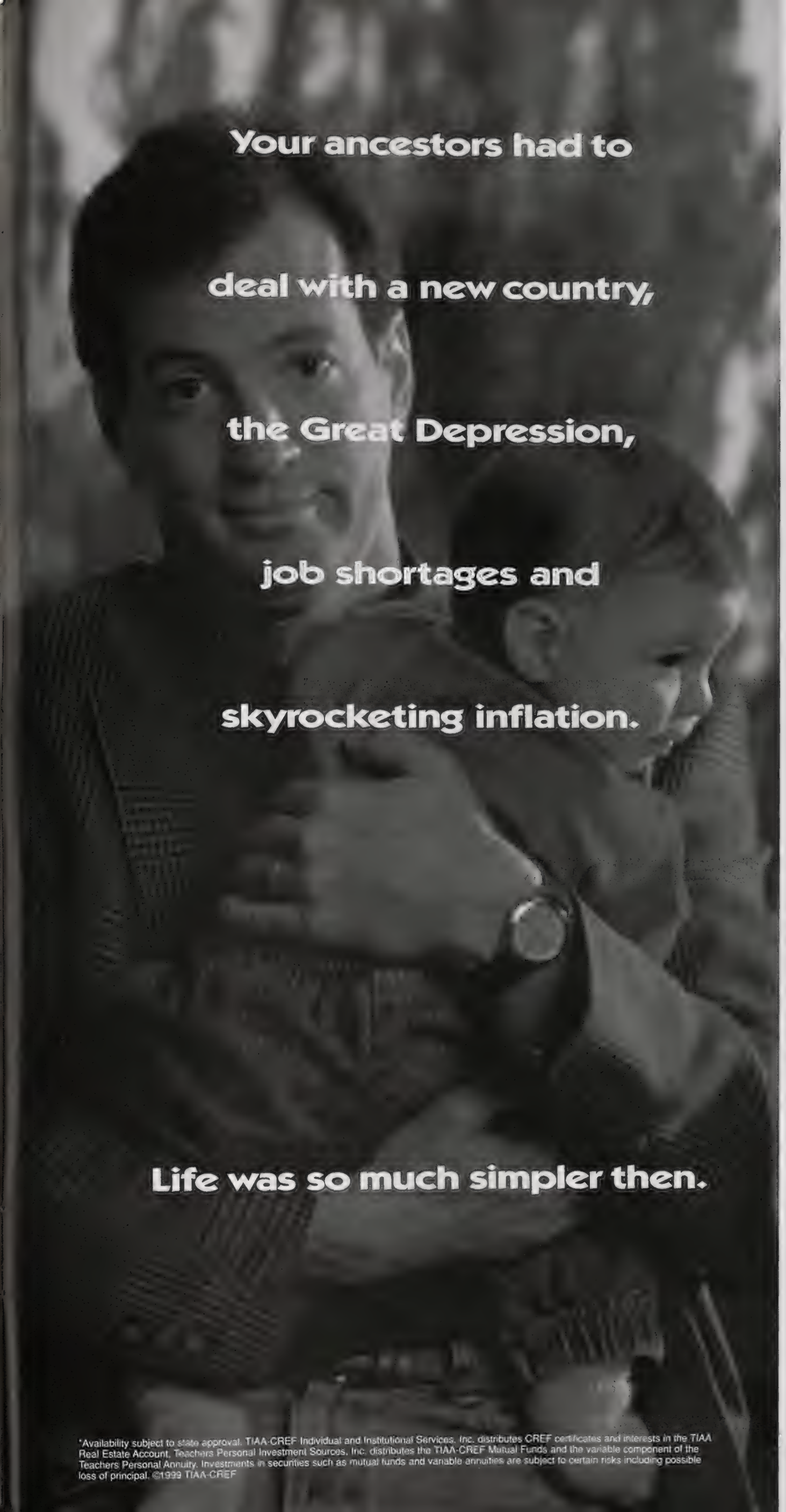
In the meantime, Van Exel is expanding his operation. "Might as well," he says. "We own our feed truck, and every hour it sits unused, we lose money on the investment. There's an incentive to make use of everything, all of the time."

That includes the majority of the CEO's waking hours, although he does spend time with his wife, Carolyn, who also grew up on a dairy farm and understands the business well. The two recently remodeled their red-brick house, which is about a mile down the road from the office. Like any parents with three high school-age children, they have plenty to do with Adam, Sarah and Jennifer, while the children also raise their own animals to show at fairs. Hank and Carolyn are members of a nearby country club.

"We sometimes head over to Monterey for several days to play golf and relax," says Carolyn over lunch one afternoon. "But after a night or two away, Hank always drives back by himself to check on things. He simply has to come back and make sure things are being done his way."

Is that the nature of the farm, or the nature of Hank? "It's what you do when you own a farm," says Hank. "Yeah, I think it's the farm," adds Carolyn, who gives her husband an affectionate look. "But then again, I think it's also Hank."

Jay Stuller last wrote on pizza and ecosensitive golf courses. Phil Schofield has shot stories about people who live on boats and the conversion of rail rights-of-way to trails.



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YOU WILL FEEL

NO PAIN

DOCTORS AND PATIENTS SWEAR HYPNOSIS WORKS, BUT AFTER YEARS OF RESEARCH WE STILL DON'T KNOW HOW

BY DONALD DALE JACKSON

THE MAN WHO VISITED CLINICAL PSYCHOLOgist John F. Chaves was suffering unbearable pain in an arm that wasn't there. His left arm had been amputated after a tree fell on his shoulder and drove him to the ground, but six months later the pain in the sundered arm—"phantom limb pain," clinicians call it—was still so severe that he could not sleep, read or carry on a conversation. His missing arm felt rigid, as if it were permanently reaching to shake someone's hand. The absent hand felt twitchy, the fingers squirmed uncontrollably. A retired factory foreman who loved to dance and garden, the man finally took his daughter's advice and came to Chaves to see if hypnosis might help.

It still surprises many to discover that there is much more to hypnosis than our outmoded image of a formally dressed showman convincing a hapless subject that he is a duck. Psychiatrists, medical doctors and psychologists, along with a shadowy brigade of less

In this 1887 painting by Richard Bergh, the onlookers appear transfixed as a hypnotist lulls his patient into an altered state.

credentialed practitioners, have used it for more than two centuries in one form or another to treat pain and illness. Since World War II, it has slipped quietly and discreetly into the clinical mainstream, to the point where the American Medical Association, many HMOs and even Medicare now recognize it. In addition to its therapeutic value with pain, hypnosis is employed today in the treatment of a variety of physical and mental afflictions, in combating phobias, in the control of bad habits like smoking and overeating, and in the all-embracing area of "performance enhancement" for strivers ranging from sprinters to stockbrokers. Hypnosis is an idea whose time has come and gone and come again, and this time it appears to be staying.

Chaves, a pleasant, soft-spoken man who oversees behavioral medicine at the Indiana University School

Mesmer believed that the balance of "magnetic fluid" in our bodies determines our health.

of Dentistry in Indianapolis, conducted several sessions with the amputee. Beginning with the "induction procedure" ("Focus your attention on a target"—a point on the ceiling—"and soon your eyes will grow very, very heavy"), he quickly put the man under hypnosis. Chaves is uncomfortable calling this a "trance," a concept that has divided and agitated generations of hypnotists. "I'd say he was relaxed, responsive and receptive," he says of the patient. His voice a gentle murmur, Chaves talked steadily for perhaps 30 minutes, using

An imposing figure, Franz Anton Mesmer introduced "mesmerism" in the 1700s.

various images to represent pain relief and well-being.

"You feel . . . every last bit of tension just leaving your body being replaced by a comfortable, peaceful feeling. . . . And now I'd like you to visualize yourself in an elevator. . . . And as I count from ten to one, I'd like you to feel the elevator slowly moving down. . . . Ten—you're more comfortable. . . . I would like you to focus all your attention on the phantom . . . to let all of the tension just drain out. . . . Certainly any discomfort that might have been there just drained away. . . . Almost as if you had it immersed in a circulating bath of warm comfortable water. . . . "

Chaves went on to suggest that the patient's mood would improve, that he would feel more alert and alive as the pain subsided, that he'd be able to sleep peacefully and wake refreshed. Then he told the man he would awake and "feel wonderful" at the count of three. When the patient's eyes popped open, Chaves asked him, "How do you feel?" On cue, the man replied, "Wonderful!"

"His pain was real," Chaves explained later, "but it was like a mem-

Gathered around a large oaken tub filled with magnetized water, iron filings and glass, Mesmer's patients grasped rods, held hands and waited for healing to take effect.

GRANGER COLLECTION (2); PP 126,127 MICH LESSING/ART RESOURCE

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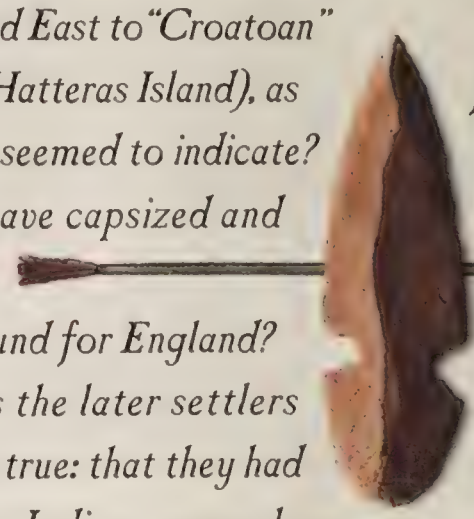
Had they moved East to "Croatoan" (now a place called Hatteras Island), as the cryptic message seemed to indicate? Or could they all have capsized and drowned in a tiny homemade boat bound for England?

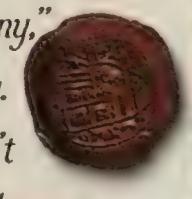
Were the tales the later settlers at Jamestown heard true: that they had gone to live with the Indians somewhere in the backcountry? Or had they all been brutally murdered?

Each theory has its merits. Yet it remains one of America's most baffling mysteries: What really happened to Virginia Dare and the Lost Colony of Roanoke Island?

Today, on the site where the events transpired, scant physical evidence exists.



For example, near the foundation of a fort, a trail lures you into the gnarled trees, feeding you tidbit by tidbit some of the fatal misconceptions the colonists could have had about the New World. And at a theater nearby, America's oldest outdoor drama, "The Lost Colony," lavishly presents yet another theory.



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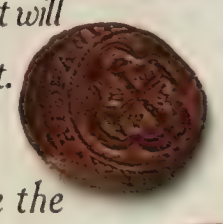

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ory that perpetuates pain. What I did was more goal management than cure. I was able to reduce his suffering, the effect of pain on his life." But what is the underlying mechanism by which hypnosis works? How do suggestions conveyed under hypnosis change what one feels? Scientists have asked these questions for years, and recently an ever-growing corps of dogged researchers has attacked them from every imaginable direction—but we still don't know the answers.

Understanding hypnosis is, in fact, just about as vexing and frustrating now as it has been throughout its up-and-down, disputatious history. Alan Gauld, author of a 1992 book on that history, concludes that hypnosis is "a kind of fairy palace, less than real, but more than illusion. . . . There is no one path by which it may be reached, no one material of which it is built, no one hidden chamber containing all its secrets. . . ."

One of the first occupants of the fairy palace was the Viennese physician Franz Anton Mesmer, who managed to give his name to a verb despite a sincerely deluded if oddly effective career. Mesmer believed that the balance of what he called "magnetic fluid" in our bodies determines our health; the sick could be cured by passes over the affected organs with magnets, contact with magnetized water or the magnetically gifted hands of the master himself. Some of his patients seemed to go into something he called "a grand crisis," which resembled what modern scientists describe as an epileptic seizure. Though his methods seemed to work, the lofty scorn of his scientific brethren in Vienna led Mesmer to move to Paris, where for a few giddy years in the 1780s he was counted a marvel of the age. He mass-produced his cure in his famous *baquets*, large oaken tubs, containing a layer of supposedly magnetized water covering a layer of iron filings and powdered broken glass. Bottles floated on top of the water; iron and glass rods projected from the lid of the barrel. As many as 20 sufferers at a time grasped the rods and held hands. Emanations from the rods were supposed to stimulate the circulation of the "magnetic fluid" in the patients.

Around the turn of the century, a quartet of supposedly hypnotized subjects sang and "plucked" after being told their brooms were banjos. Such stunts were popular stage acts.

The power of suggestion doubtless had more to do with Mesmer's suc-

cess than did his magnetic fluid, since he pointedly informed his patients what was going to happen to them. He was also personally impressive, with an imposing presence and the manner of a faith healer. Though "mesmerism" persisted in various incarnations into the mid-19th century, its creator faded into disrepute when a royal commission, which included Benjamin Franklin and the chemist Antoine-Laurent Lavoisier, decreed that there was nothing to Mesmer's magnetism except "excitement of the imagination."

Mesmer's collision with the scientific establishment failed to dissuade other venturers from exploring the phenomenon he had discovered. A Hindu-Portuguese priest known as the Abbé Faria nudged one piece of the puzzle into place when he wrote in 1819 that the stimulus for what he called the "lucid sleep" of mesmerism was not magnetism but concentration by the subject. Faria had his clients relax, lean back, empty their minds and concentrate on falling asleep, which most promptly did. He could then induce them to feel illusions of heat and cold and to experience various tastes and smells. Like many of his successors, however, Faria was sometimes tempted to overreach. He once tried to demonstrate that he could mesmerize a canary and command it to die. A witness described the unexpected result: the Abbé went "into a self-induced trance in which it seemed the canary was willing him to die instead." Faria survived the interspecies mesmeric shoot-out "without any apparent ill-effects."

British surgeon James Braid drew the curtain back a bit more when he concluded through experiments that what he called "nervous sleep" was a condition brought about by a suggestion that sometimes came from the subject. Braid also introduced the words "hypnosis" and "hypnotism," which derive from the Greek *hypnos* (sleep). He used hypnosis routinely in

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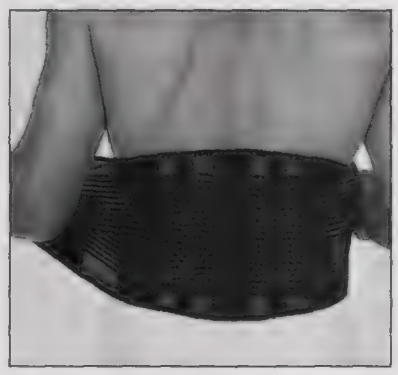

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his medical practice in the 1840s and 1850s, reporting cures or improvement with deafness, rheumatic disorders and paralysis.

The most remarkable breakthrough came with James Esdaile, a British doctor working in India who performed more than 300 major operations in the 1840s using hypnosis, which he still called mesmerism, as

The French neurologist Jean Martin Charcot believed hypnosis was related to hysteria.

anesthesia. Esdaile would pass his hands over the afflicted body part and breathe or point his fingers at the patient until he entered a trance in which, Esdaile said, he felt no pain.

Esdaile's description spared none of the gory details. In removing a nasal tumor, he reported, he pushed a long knife "through the skin at the inner corner of the eye, and dissected the cheek back to the nose," causing "a shocking gush of blood, and brain-like matter." The patient, awakening with the doctor sewing up his downsized face, swore that he felt nothing. Esdaile did 19 amputations and removed dozens of scrotal tumors, common among Indian men because of the prevalence of elephantiasis. In one astonishing case, he excised a 103-pound tumor so enormous that the only way he could operate was to

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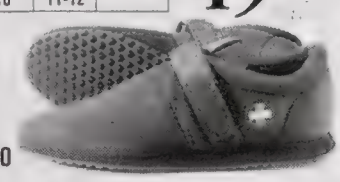

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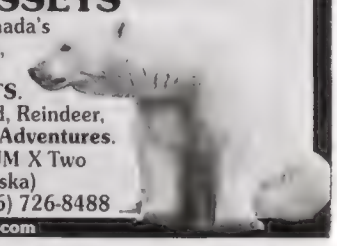

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cut with a two-edged knife while the tumor was wrapped in a sheet attached by rope and pulley to a rafter beam. Esdaile wrote that the patient didn't even quiver. By the standards of the day, his approach probably did reduce pain, but John Chaves found evidence that some of Esdaile's patients showed some signs of discomfort, even if they didn't acknowledge it.

While Esdaile performed wonders in India, mesmerism's show-biz potential was flowering in the United States. "Traveling mesmerizers" toured the country, putting on exhibitions where "scores of silly girls," as one critic fussed, were "pricked with needles, had their toes crushed and teeth extracted" while allegedly entranced. A teenage Sam Clemens stepped forward as a volunteer when a mesmerizer visited Hannibal, Missouri. After three nights of gazing earnestly at a "disc" and showing no reaction whatever, young Sam decided to fake it. "I rose slowly, bent and gazing," he wrote in his autobiography, "and followed that disc all over the place, just as I had seen the others do. . . . Upon suggestion I fled from snakes, passed buckets at a fire, became excited over hot steam-boat races, made love to imaginary girls . . . all the customary marvels."

The awkward part was the obligatory pins in the flesh. "They would stick a pin in my arm and bear on it until they drove it a third of its length in, and then be lost in wonder that by a mere exercise of will power the professor could turn my arm to iron and make it insensible to pain. Whereas it was not insensible at all; I was suffering agonies of pain." When the mesmerist's engagement closed "there was but one person in the village who did not believe in mesmerism and I was the one."

Danish hypnotist Carl Hansen induced his subjects to drink make-believe champagne and then act drunk, or to munch a potato they

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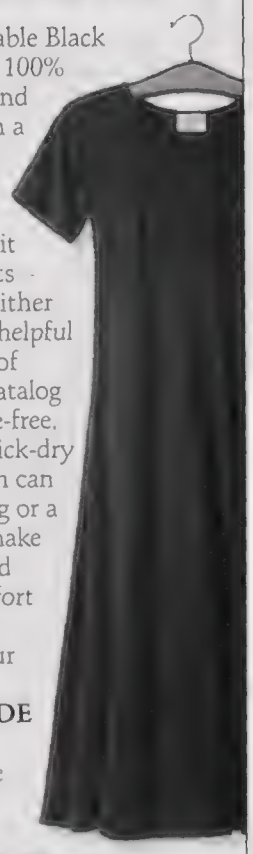

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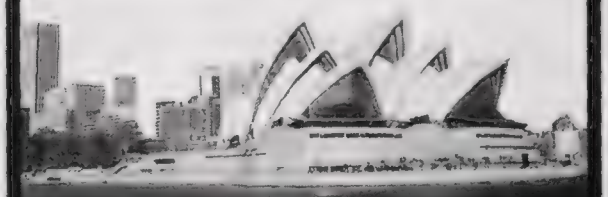

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When John Barrymore entranced a fair maiden in the title role of the 1931 film *Svengali*, his performance bore no resemblance to the way modern hypnotists work.

believed was a pear. He also did the "human plank" trick, where the subject is stretched out rigidly with his head on one chair and his feet on another. Hansen's volunteers were probably among the 5 to 10 percent of the population some modern researchers have characterized as "fantasy-prone." One particularly unsettling stage act was sewing an entranced subject's lips together. Harry Houdini told writer John Scarne how it was done. The subject was what magicians call a "horse," a stoic individual who trains himself from childhood not to feel pain.

Clemens was skeptical of mesmerism, but other writers were captivated by it. Charles Dickens practiced it often and even contemplated a career as a mesmerist. In Edgar Allan Poe's gripping story "The Facts in the Case of M. Valdemar," a man is suspended in a mesmeric trance between life and death. Honoré de Balzac, H. G. Wells and Sir Arthur Conan Doyle all wrote stories built around hypnosis, but the most memorable hypno-novel was George Du Maurier's *Trilby*, in which the diabolical Svengali exerts total domination over the winsome and helpless Trilby. The book's publication in 1894 led to demands that hypnosis be outlawed.

The quest to understand what happens during hypnosis—what mechanisms are at work, and whether they are physical, psychological or both—hummed along unabated. In the late 19th century, it evolved into a bitter rivalry between two French physicians, neurologist Jean Martin Charcot of Paris and Hippolyte Bernheim, a doctor from Nancy. The issue was whether susceptibility to hypnosis was a pathological state, as Charcot believed, or whether it came about through suggestions from either the hypnotist or the subject himself, as Bernheim contended.

Charcot, the premier neurologist of his time, gave lectures at a Paris hospital where he argued that the "morbid condition" of hypnosis was closely linked to hysteria. To support this thesis, he brought women supposedly hysterical onto the stage and had them perform various bizarre acts under hypnosis. Critics claimed that they were frauds.

Bernheim reached conclusions that served as a foundation for current notions about hypnosis. In his view, most people can be hypnotized

because the phenomenon is driven by the force of suggestion, which he defined as "the aptitude to transform an idea into an act." Bernheim explained and amplified the role of suggestion that Braid had noted more than 40 years earlier, arguing that the willing receptivity of a hypnotic subject was a key ingredient. The simpler and stronger the suggestion, the more effective it is, he believed, and it worked with wide-awake subjects as well as the entranced.

Sigmund Freud, who studied under both Charcot and Bernheim early in his career, used hypnosis to encourage patients with hysterical symptoms to talk, and thereby discovered the long-repressed experiences that underlay their problems. Eventually he abandoned it, however, in favor of free association and the interpretation of dreams, which became the basis of psychoanalysis. In rejecting what was coming to be called hypnotherapy, Freud propelled hypnosis into another nosedive in its roller-coaster history.

After World War I, investigators devoted their time to trying to isolate a physiological or biological marker for the hypnotic state—a measurable change in brain waves, say. Their successors are still at it.

No one denies that the brain is in charge. It's the brain that releases pain blockers, controls bleeding when people go into shock and triggers appropriate reactions to color, sound and suggestion. Does hypnosis influence the way the brain works? That is where experts differ. Some researchers are convinced that it does not. Some people are by nature highly susceptible, they say, and these individuals can experience the effects of suggestion whether they have been hypnotized or not. Others, however, are convinced that hypnosis induces something like an altered state.

An article in *New Scientist* magazine last summer summarized work that has been done recently at Massachusetts General Hospital and the University of Montreal in Canada. In each case, brain scanners detected increased blood flow in relevant parts of the brains of hypnotized subjects

While the ever-alert Ed McMahon looked on, "The Amazing Kreskin" did the "human plank" routine on *The Tonight Show* with Johnny Carson, who was fully conscious.

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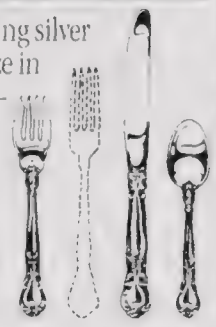

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"I told them to imagine they were on a beach, listening to the surf, and Bam! *they were hypnotized."*

who were put through color and pain tests. Other studies seem to confirm that something unusual is indeed going on in the brain during hypnosis. But skeptics continue to insist this could be due to the power of suggestion. "To expect a consensus about the nature of hypnosis to emerge when nobody even knows how the brain produces everyday consciousness is rather optimistic," *New Scientist* concludes.

Robert A. Baker, a retired psychology professor at the University of Kentucky and the author of the 1990 book *They Call It Hypnosis*, becomes riled when he considers the inflated powers credited to hypnosis. He doesn't even like the word: "It comes from the Greek for 'sleep,' and it's not sleep," he grumbles. "Call it relaxation therapy." Baker first became aware of his own hypnotic skills, he recalls, when he taught "regressive relaxation" to a college class. "I told them to imagine they were on a beach, listening to the surf, feeling the sun, glasses tinkling, and *Bam!* they were gone—hypnotized!

"There's nothing much to it. I can show you how to do it in five minutes, because there's no difference between how you are now and when you're hypnotized. There are basically four things involved: compliance, relaxation, suggestion and imagination. That's it. People go into their past and, hell, their future because our imaginations are so powerful that if we get a suggestion we run with it. Ninety percent of us will come up with a past life if it's set up right."

Like Baker, his friend the "mentalist," known as "The Amazing Kreskin," looks askance at what he considers hypnosis's overblown repute. Kreskin, who has been performing in clubs and on television for many

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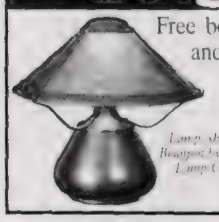

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years, dropped hypnotism from his act when he discovered that "I got the same results without it. I can give someone a suggestion that they'll follow although they're totally conscious—you could call it 'waking hypnosis.'" (In fact, that's what researchers in the 1920s *did* call it.) He claims that he has the ability to "perceive" thoughts in his audience members by detecting unconscious signals.

He did the "human plank" routine with a fully conscious Johnny Carson on *The Tonight Show*. "I stretched Johnny between two chairs and got Bette Midler to sit on him. 'You want me to *sit* on *Johnny*?' she asked. Carson said later that she felt like a baby on his chest. NBC was afraid I'd hurt him. They got letters from doctors saying I'd secretly hypnotized him before the show. Johnny got so mad we did it again two weeks later. The so-called medical authorities are sometimes the worst. They're authorities on their own point of view."

Clinicians today often use hypnosis in conjunction with certain kinds of therapy to relieve a particular pain or anxiety, conquer a bad habit, improve performance. Psychiatrist Herbert Spiegel, a respected expert who still teaches and practices hypnosis in New York at 84, helps patients fight their fear of flying by instructing them under hypnosis "to accept the plane as an extension of their arms" and to "see the pilot as their agent, the way a secretary is your agent."

A man who was terrified of flying visited clinical psychologist Marc Oster at his office in Arlington Heights, Illinois, shortly before he was due to fly west for a job-training course. Oster focused on the imagery of the humming engines, planting the idea that the sound was like a concert and the passenger was sitting in a theater. This got him to his destination, but a few days later Oster got an anxious phone call. "You didn't say anything about the flight back home," the man complained.

Psychologist Michael Flynn of Chicago has his hypnotized snake-phobic patients envision a snake in a cage. "I'm careful to make it a garden snake," he says. He then guides the patients through a series of relaxing images until they reach the point where they are able to "hold" the imaginary snake.

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In 1986, a French hypnotist created a stir when he put dozens of people to sleep. Some researchers are convinced that this is not "hypnotism" but self-deception.

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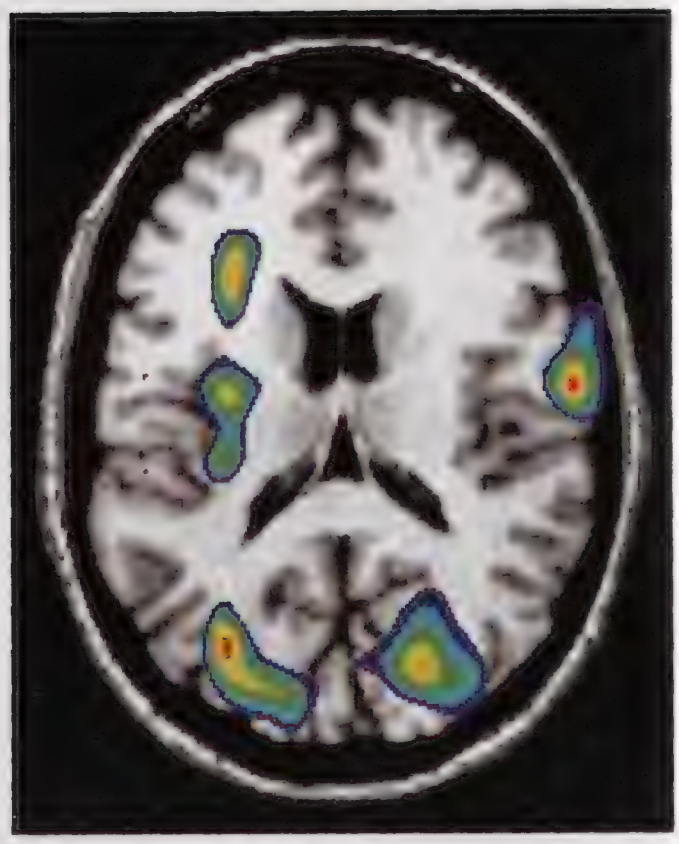

Colored regions in the brain scan of a hypnotized subject show increased blood flow that could trigger visual images.

With weight loss, the evidence is conclusive, according to psychologist Irving Kirsch of the University of Connecticut. Kirsch has compared all the studies that have been done and found that hypnosis does help people reduce. Motivation is crucial. "It's like the joke about how many therapists it takes to change a lightbulb," Kirsch says. "The answer is one, but the bulb has to want to change." Clinicians use hypnosis to help athletes and other performers who lose their confidence by "reorienting" them, Oster explains. "It's a matter of their head getting in the way of their performance. We take them back to when they were at their best, like remembered wellness." "There was a wonderful phrase Muhammad Ali used," Spiegel adds. "'Float like a butterfly, sting like a bee.' That's the essence of it, that's what you want to achieve with athletes and performers."

Two major controversies cloud the ever-contentious realm of hypnosis today. One is the question of what to do about untrained, unlicensed and unregulated "lay hypnotists." The other dispute is about the legal standing of hypnotically aided testimony.

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Police departments began training officers in hypnosis. In L. A., they were called the Svengali Squad.

their names, but most lack the academic training required for certification by the two recognized professional organizations in the field. Some learn hypnotherapy in a weekend workshop. Almost anyone, in fact, can set up as a hypnotherapist merely by calling himself one.

The status of hypnosis in law enforcement has always been controversial. In the mid-1950s, some police departments began training officers in hypnosis to help prod witnesses' memories. In Los Angeles the hypnocops were known as the Svengali Squad. Courts, for the most part, refused to admit hypnotically induced statements as testimony. "The danger is asking leading questions," Robert Baker explains. "Witnesses sometimes fabricate an answer under hypnosis because they want to help." Some courts have imposed very strict guidelines for such testimony, but in recent years cases in which therapists helped patients recall false memories of child abuse have underscored doubts about such uses of hypnosis.

Clinicians are divided. Herbert Spiegel points out that "the opposite of one truth can sometimes be another truth. A person can lie like hell under hypnosis but you can also come up with the facts you wouldn't get otherwise. The key is corroboration from other sources."

Spiegel was called in on a murder case in which a man was accused of stabbing his boss. "He couldn't remember anything until I hypnotized him and regressed him to the night it happened," Spiegel recalls. "Then he remembered his boss lunging at him with a knife. He grabbed the knife and stabbed him. There was corroborating evidence, and he was acquitted on grounds of self-defense."

Spiegel, a short man with a shiny

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pate and a brisk, affable manner, greets me at the door of his 28th-floor Park Avenue apartment. I am there to interview him and find out about his "hypnotic induction profile," but I also want to learn whether I'm hypnotizable. The often-cited figure is that 10 to 15 percent of the population is not. Kreskin says these are people who order the same meal whenever they go to a restaurant. I don't want to be one of them.

It is soon clear that the doctor is doing the interviewing. He produces a clipboard and begins asking questions. Do I get totally absorbed in a book or a movie? Do I like to control a situation? Do I prefer living in the past, present or future? He has me roll my eyes upward, an index of hypnotizability. We spend some time trying to get my left arm to levitate. It finally quivers and rises after he says, "Go ahead, be big about it." I tell him later it wasn't really involuntary. He says not to worry about it. He gives me a score of 11 on a 0-to-16 scale of hypnotizability. "You didn't levitate your arm until the third try, but you did do it," he says.

We move on to my interview of him. "You know, mainstream medicine is still reductionist," he snorts. "They believe in specific causes and effects like germs and viruses. I believe our behavior results from an interaction of biological, psychological and social factors. They're all important. There's more emphasis today on psychological influences on health, what we used to call psychosomatic elements. And it's about time."

He looks bright-eyed and content, serene in body and mind. The lights of Manhattan twinkle on outside his windows and I feel like I'm in a Cary Grant movie. Mesmer may be out there somewhere.

It is good to be hypnotizable.

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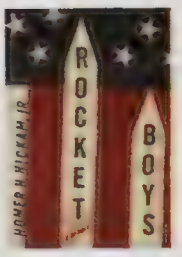

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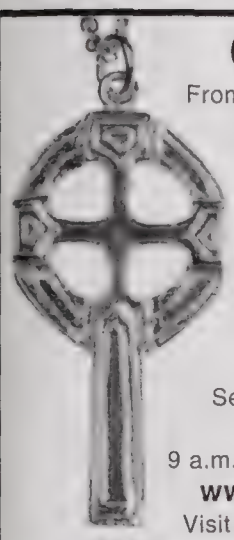
During the heart of the Cold War, Coalwood was an unlikely launching pad. In this "company town," where company houses were painted white only to turn gray with coal dust, the mine superintendent's son measured his days in shifts. "I ate supper after Dad saw the evening shift down the shaft," Hickam writes, "and I went to sleep to the ringing of a hammer on steel and the dry hiss of an arc welder at the little tipple machine shop during the hoot-owl shift." Playing "min-



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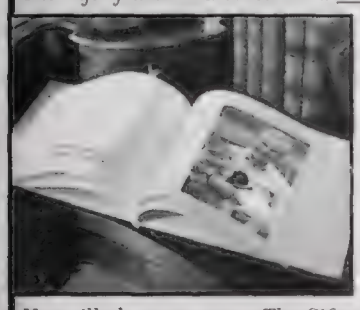

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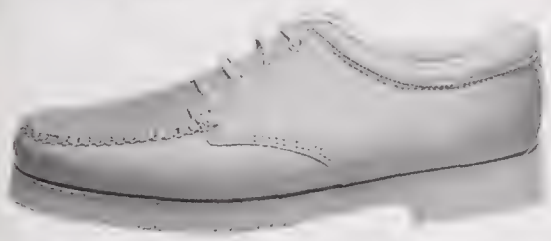

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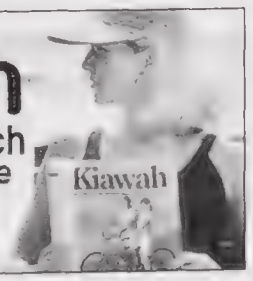

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er," boys followed their fathers up the sooty street to watch them shoulder shovels and go down into the earth. The miners, proud and tough, expected no other future for their sons.

Then in October 1957, a blip of light inched across the skies over West Virginia. Hickam, his mother and several neighbors gaped from front yards, their eyes lifted toward *Sputnik*. Desperate to learn how rockets were built, Hickam began studying physics and reading about rocket scientist Wernher von Braun. He and a few friends formed the Big Creek Missile Agency. The countdown had begun.

The BCMA named its rockets for a flightless bird, the auk. *Auk I* didn't go into space, but it sent Hickam's fence skyward, in splinters. Many a parent might have put an end to such nonsense, but the Hickams became a house divided. Iron-willed Homer Sr. fought his rocket boy at every turn, insisting his son would work in the mine. Homer Jr.'s mother wanted better. "Show him you can do something," she pleaded with her son. "Build a rocket."

Launched from a flat nicknamed Cape Coalwood, *Auks* began roaring to a few hundred, then a few thousand feet. Meanwhile, back on earth, the town trudged into a fading future, suffering layoffs, strikes and a cave-in. The rocket boys, once ridiculed, caught Coalwood's fancy. Soon mining engineers were helping Homer shape nozzles and valves, while teachers slipped him books on calculus and the principles of rocketry.

Many a memoir has but one story to tell—the author's own. But Hickam's is the tale of a town caught between the old technology and the new. Coalwood's characters include nerdy rocket boys, football team toughs, fractured families, hardened coal bosses, and ordinary citizens who cheer at each liftoff.

In crafting this fine memoir, Hickam admits to "a certain author's license." Yet parts of the book are a

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little too fine. Hickam's descriptions are striking, but much of his dialogue reads as if borrowed from *The Waltons*. The coming-of-age saga also suffers from too many school dances and lost loves. Yet the main narrative, as inspiring as any to come out of the space age, rings like a nine-pound hammer on coal.

Ultimately, *Rocket Boys* is about much more than rockets. As Hickam states, "Until I began to build and launch rockets, I didn't know my hometown was at war with itself over its children and that my parents were locked in a kind of bloodless combat over how my brother and I would live our lives. I didn't know that if a girl broke your heart, another girl, virtuous at least in spirit, could mend it on the same night. And I didn't know that the enthalpy decrease in a converging passage could be transformed into jet kinetic energy if a divergent passage was added. The other boys discovered their own truths when we built our rockets, but those were mine."

A few decades after rockets flew over Coalwood, the town's mine was closed. But by then Homer H. Hickam, Jr., was a NASA engineer. His memoir honoring both earthbound miners and their sons who gazed into space is required reading for understanding the American Dream.

Reviewer Bruce Watson is a writer based in Leverett, Massachusetts.

One Round River: The Curse of Gold and the Fight for the Big Blackfoot

Richard Manning

Henry Holt, $25.00

"CATTLE," WRITES RICHARD MANNING, "do not belong in Montana." So you know right off—if you celebrate Earth Day, *One Round River* will accord with your worldview. Otherwise, you can expect apoplexy.

Or maybe not. Manning is clever, his indignation finely tuned. Whatever your conservation stance, he might give you new thoughts.

Stream-mucking steers. Corporate clear-cutters. SUV-riding California transplants transmogrified into "cappucino cowboys." Manning weaves them into a bravura analysis of what is beating up his beloved Big Blackfoot River. But the killer is a planned gold mine, cutely named Seven Up Pete.

Its site is half the size of Manhattan. The hole will be a mile across. Excavators will heap their diggings 30 stories high. Miners will sprinkle cyanide over these piles, letting it trickle through, accumulating gold, until it oozes from the bottom. Its gold extracted, the deadly runoff will flow into man-made leach pools, which Manning says almost inevitably

leak. And leaking cyanide is the least of Seven Up Pete's scourges.

Learning about the arrest of local hermit Theodore Kaczynski as the Unabomber, for mailing explosive devices to people he deemed nature's enemies, one of Manning's friends quipped: "Another promising career cut short." Manning asks: "Does this surprise you, that there might be environmentalists who sympathize with mad bombers?"

Manning is one irritated cowpoke. Yet, his book presents few characters wearing hats precisely black or white. Robert Redford, for instance, directed a hit movie, *A River Runs Through It,* based on Norman Maclean's book about fly-fishing and other matters along the Big Blackfoot (SMITHSONIAN, September 1992). But Redford actually filmed a stand-in river because the Big Blackfoot's mountains are clear-cut, and most of its trout are gone. Logging's damage to rivers, Manning says, comes mainly from failure to leave bankside trees standing.

At one point, Manning skids his car off a snowy mountain road. Loggers, passing in a pickup truck, haul his car out, then announce they must leave before troopers arrive: "They'll give you a ticket for not calling a tow truck!" It is a paranoid fantasy to which they cling because it "proves" government's despicability. Similarly, implies Manning, logging—done right—may do less harm than environmentalists believe. Forests grow back.

In the meantime, environmentalist Robert Redford's movie had undesirable repercussions. After the film popularized the area, Manning's neighbors adopted a new phrase: "A realtor runs through it."

Manning rues the coming to his valley of Californian would-be cowboys, whom locals describe as "all hat and no horse." That is untrue: on ten-acre "ranchettes," they build themselves log mansions and do manage to graze a horse or two. But Manning admits that he and his friends also are immigrants in this country.

Real ranchers, like loggers, says Manning, wreak real destruction. Bison enhanced these dry prairies. But cows, liking moisture, bunch along rivers, creating mucky havoc.

Yet ranchers must also rely on the land. And some, it turns out, are dedicated range stewards—like the aptly named Land Lindbergh, son of the aviator—striving to ranch profitably while pioneering the use of nondestructive techniques.

So it goes in this book: we meet the "enemies" and they have no horns. But then Manning comes to Seven

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Up Pete and gold. "I haven't the slightest interest in providing balance to this story," he states unapologetically. "I don't want to talk to them, because they are evil."

He does not mean individual miners. He introduces an apostate mining engineer, who announces: "I'm not going to tear down any more mountains." But unlike logging and ranching, and maybe even the despised ranchettes, gold mining's damage, Manning says, is irreversible. Gold mining gouges up toxic metals, concentrates them, oozes them into the water table. "How can you ask me," inveighs Manning, "to trade clean rivers and my mountains for your Rolex watch?"

This book is about humanity's perverse love of gold. It is also about population growth, in Manning's words, "the sheer crushing weight of human biomass." It is about individuals, like the disgruntled Vietnam vet, now an "Environmental Ranger," secretly videotaping regulation-flaunting mines. Ultimately, it is about consuming ourselves out of our home. "Gold," Manning says, "is not life, and I do not need it."

Richard Wolkomir writes from Vermont.

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The Object at Hand [p. 30]

Paderewski by Adam Zamoyski, Atheneum, 1982

The Paderewski Memoirs by I. J. Paderewski, Da Capo Press (New York), 1980

Steinway and Sons by Richard Lieberman, Yale University Press, 1995

Highlights [p. 36]

Earth Door Sky Door: Paintings of Mustang by Robert Powell, Serindia Publications (London), 1999

Carolina Dogs [p. 44]

Carolina Dog Association, Box 2721, Aiken, South Carolina 29802, Website: www.carolinadogs.org

Primitive and Aboriginal Dog Society, 5265 Old Stage Road, Central Point, Oregon 97502

A History of Dogs in the Early Americas by Marion Schwartz, Yale University Press, 1997

"Stalking the Ancient Dog" by Christine Mlot, *Science News*, June 28, 1997

Swing Dancing [p. 60]

Swingin' at the Savoy by Norma Miller with Evette Jensen, Temple University Press, 1996

Aerials for Swing Dancing (video), vols. 1 and 2, Pasadena Ballroom Dance Association, P.O. Box 91131, Pasadena, California 91190-1131

"The Frankie Manning Collection" (five videos), Living Traditions, 2442 NW Market Street, Suite 168, Seattle, Washington 98107

Bookstores [p. 78]

"Amazon.com: the Wild World of E-Commerce" by Robert D. Hof, *Business Week*, December 14, 1998

"Larry McMurtry's Dream Job" by Mark Horowitz, *New York Times Magazine*, November 30, 1997

Antiquarian Bookselling in the United States: A History from the Origins to the 1940s by Madeleine B. Stern, Greenwood Press (Westport, Connecticut), 1985

Meteorite Hunters [p. 90]

Department of Planetary Sciences, University of Arizona Website: meteorites.lpl.arizona.edu

Meteorites by Robert Hutchison and Andrew Graham, Sterling Publishing (New York), 1993

Cosmic Debris: Meteorites in History by John G. Burke, University of California Press, 1986

Rocks From Space by O. Richard Norton, Mountain Press (Missoula, Montana), 1998

Emily Carr [p. 102]

The Life of Emily Carr by Paula Blanchard, University of Washington Press, 1987

Emily Carr by Doris Shadbolt, Douglas & McIntyre (Vancouver), 1990

Emily Carr: A Biography by Maria Tippett, Stoddart Publishing (Toronto), 1979

Beloved Land: The World of Emily Carr, introduction by Robin Laurence, University of Washington Press, 1996

Milk [p. 114]

"Give and Take" by Jim Dickrell, *Dairy Today*, February 1998

"What's the fuss about cow hormones?" by David Barbano, *Consumers' Research Magazine*, May 1994

Dairy Today, P.O. Box 1167, Monticello, Minnesota 55362, Website: www. dairytoday.com

Hypnosis [p. 126]

"You Are Feeling Very, Very Sleepy . . . " by David Concar, *New Scientist*, July 4, 1998

A History of Hypnotism by Alan Gauld, Cambridge University Press, 1992

They Call It Hypnosis by Robert A. Baker, Prometheus Books (Buffalo, New York), 1990

The World's Greatest Hypnotists by John C. Hughes and Andrew E. Rothovius, University Press of America, 1996

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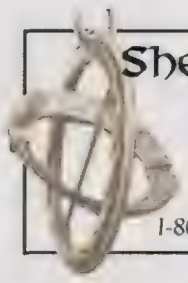

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"Anyone Having Trouble Hitting the Notes?"

BY CHRIS GRANSTROM

I WAS LURED INTO JOINING OUR community theater group's production of *Damn Yankees* a while back by the offhand remark of a friend who was playing the lead. "We need ballplayers," he said. "You could be a ballplayer." At 40, I knew I was unlikely ever to hear that again so I decided to go for it.

I had no idea what to expect when I showed up at my first rehearsal. I didn't even know the play was about a man who sold his soul for the chance to lead his beloved Washington Senators to victory over the hated New York Yankees. I did know that I was to play a Senator, and I was trying to pick my teammates out of the crowd of amateur actors in the room when a young woman with red lips walked up to the piano, snapped her fingers, played a chord and began to lead us in vocal exercises.

"Anyone having trouble hitting the notes?" our leader, Heather, asked. She suggested that I stand next to one of the stronger singers and follow his lead. It helped. I stayed close to him when we finished the exercises and started singing real songs. After a while, he casually moved away.

That was the beginning of seven weeks of grinding practice. Heather seemed to think it was hopeless; at times, I agreed with her. But finally, ready or not, it was opening night.

We were in the dressing room at the local high school putting on makeup and costumes, feeling the adrenaline

For an old ballplayer, exercises are a cinch—unless they're vocal.

flow. Dave, who played the Senators manager, was in the corner practicing his lines one last time, jutting out his chin and gesturing to the wall. Heather led us through some warm-ups. Barb, our soft-spoken stage manager, came in and stood on a chair. She handed out little awards to cast members for minor achievements. Then she announced five minutes till curtain. We could hear the orchestra begin the overture. This was it.

The ballplayers' entrance came in the second scene. I spoke my line; the

world didn't end. I was so amazed, I lost my concentration and flubbed my next line. A teammate had to ad-lib. I tried to stay loose, then realized I was fidgeting. Stand still, I told myself, but not too still.

Our big song-and-dance routine was in the second act. The audience loved it. What a sensation! When it was time for curtain calls, the ballplayers drew another cheer. How far we had come in seven weeks!

The cast was invited to a party at the local inn afterward, and we ballplayers decided to stay in our Washington Senators uniforms. We strutted around the room, elated and basking in adulation.

Then a group of scruffy-looking young people came in and sat down at a large table in the corner. Abruptly, the attention of the well-wishers shifted from us to them. What was this? A friend told me the interlopers were a big-time rock band, just arrived in town for a concert. It was a bitter lesson in the fickle nature of fame. I sank, deflated, into a chair.

Later, my 8-year-old daughter crawled onto my lap and said in my ear, "Daddy, you know when I came into the dressing room after the play and hugged you but didn't say anything? It's because I was so proud of you that I couldn't speak." For a moment I couldn't speak either, but suddenly I was sure of one thing: that's the right kind of fame for a middle-aged ballplayer like me.

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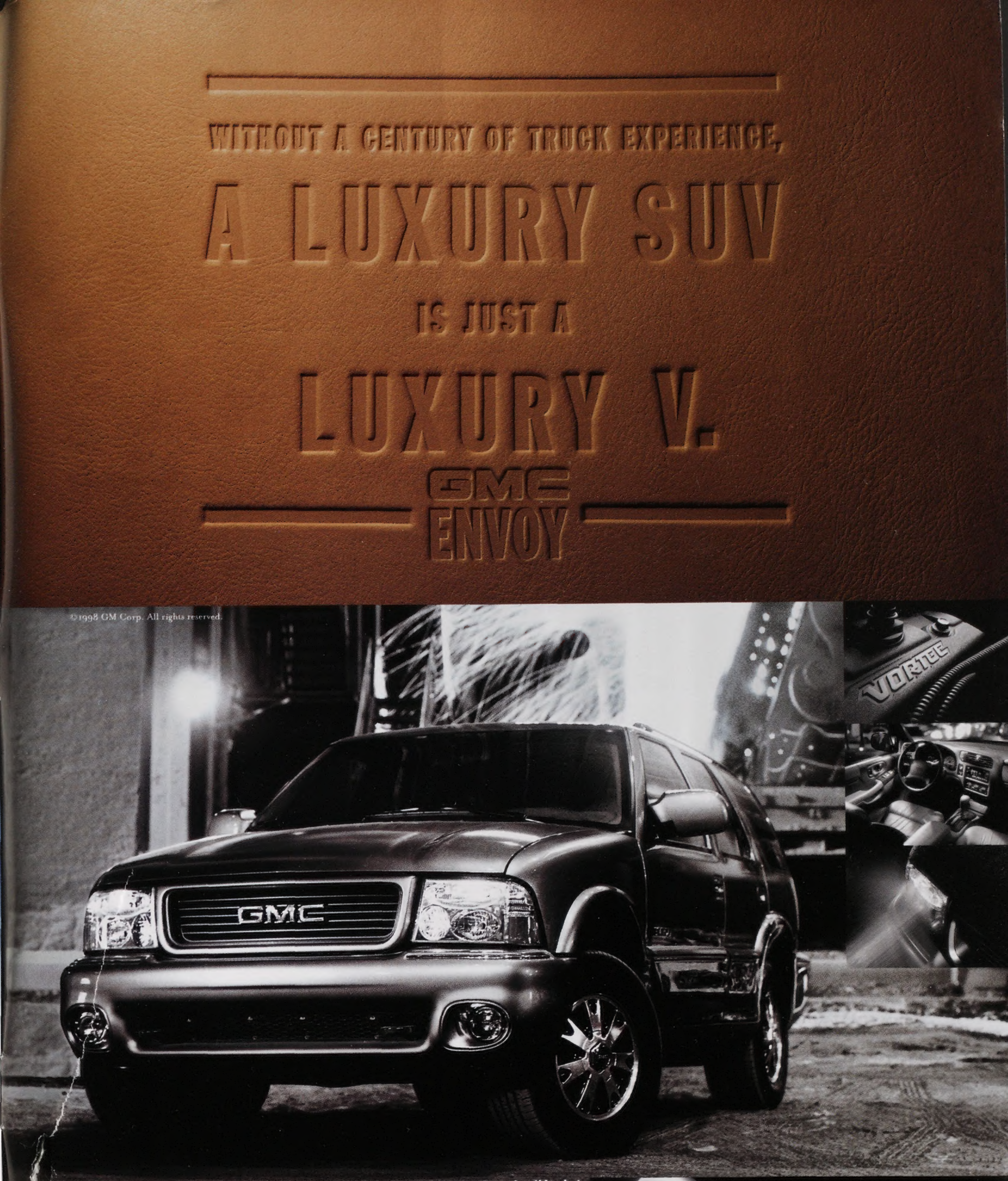

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